



SEQUENCE LISTING

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<120> Apoptosis-Related Kinase/GPCRs

<130> 8912/2015

<140> US 10/781,581

<141> 2004-02-18

<150> US 10/764,238

<151> 2004-01-23

<150> US 60/457,533

<151> 2003-03-25

<150> UK 0301566.6

<151> 2003-01-23

<160> 226

<170> PatentIn version 3.2

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Gly Leu Asp Ala Leu Val Tyr Asp Leu Asp Phe Pro Ala Leu Arg Lys
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Asn Lys Asn Ile Asp Asn Phe Leu Ser Arg Tyr Lys Asp Thr Ile Asn
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Phe Tyr Thr Ala Glu Val Val Leu Ala Leu Asp Ala Ile His Ser Met
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Lys Glu Glu Glu Ile Ser Asn Leu Lys Ala Ala Phe Glu Lys Asn Ile
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Asn Thr Glu Arg Thr Leu Lys Thr Gln Ala Val Asn Lys Leu Ala Glu
 995 1000 1005

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Leu Trp His Val Phe Lys Pro Pro Pro Ala Leu Glu Cys Arg Arg		
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Cys His Val Lys Cys His Arg Asp His Leu Asp Lys Lys Glu Asp		
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Leu Ile Cys Pro Cys Lys Val Ser Tyr Asp Val Thr Ser Ala Arg		
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Asp Met Leu Leu Leu Ala Cys Ser Gln Asp Glu Gln Lys Lys Trp		
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Val Thr His Leu Val Lys Lys Ile Pro Lys Asn Pro Pro Ser Gly		
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Phe Val Arg Ala Ser Pro Arg Thr Leu Ser Thr Arg Ser Thr Ala		
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3823

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<212> PRT
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<400> 177

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35 40 45

Arg Glu Val Lys Ser Leu Lys Lys Leu Asn His Ala Asn Val Ile Lys
50 55 60

Leu Lys Glu Val Ile Arg Glu Asn Asp His Leu Tyr Phe Ile Phe Glu
65 70 75 80

Tyr Met Lys Glu Asn Leu Tyr Gln Leu Met Lys Asp Arg Asn Lys Leu
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Phe Pro Glu Ser Val Ile Arg Asn Ile Met Tyr Gln Ile Leu Gln Gly
100 105 110

Leu Ala Phe Ile His Lys His Gly Phe Phe His Arg Asp Met Lys Pro
115 120 125

Glu Asn Leu Leu Cys Met Gly Pro Glu Leu Val Lys Ile Ala Asp Phe
130 135 140

Gly Leu Ala Arg Glu Leu Arg Ser Gln Pro Pro Tyr Thr Asp Tyr Val
145 150 155 160

Ser Thr Arg Trp Tyr Arg Ala Pro Glu Val Leu Leu Arg Ser Ser Val
165 170 175

Tyr Ser Ser Pro Ile Asp Val Trp Ala Val Gly Ser Ile Met Ala Glu
180 185 190

Leu Tyr Met Leu Arg Pro Leu Phe Pro Gly Thr Ser Glu Val Asp Glu
 195 200 205

Ile Phe Lys Ile Cys Gln Val Leu Gly Thr Pro Lys Lys Ser Asp Trp
 210 215 220

Pro Glu Gly Tyr Gln Leu Ala Ser Ser Met Asn Phe Arg Phe Pro Gln
 225 230 235 240

Cys Val Pro Ile Asn Leu Lys Thr Leu Ile Pro Asn Ala Ser Asn Glu
 245 250 255

Ala Ile Gln Leu Met Thr Glu Met Leu Asn Trp Asp Pro Lys Lys Arg
 260 265 270

Pro Thr Ala Ser Gln Ala Leu Lys His Pro Tyr Phe Gln Val Gly Gln
 275 280 285

Val Leu Gly Pro Ser Ser Asn His Leu Glu Ser Lys Gln Ser Leu Asn
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Lys Gln Leu Gln Pro Leu Glu Ser Lys Pro Ser Leu Val Glu Val Glu
 305 310 315 320

Pro Lys Pro Leu Pro Asp Ile Ile Asp Gln Val Val Gly Gln Pro Gln
 325 330 335

Pro Lys Thr Ser Gln Gln Pro Leu Gln Pro Ile Gln Pro Pro Gln Asn
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Leu Ser Val Gln Gln Pro Pro Lys Gln Gln Ser Gln Glu Lys Pro Pro
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Gln Thr Leu Phe Pro Ser Ile Val Lys Asn Met Pro Thr Lys Pro Asn
 370 375 380

Gly Thr Leu Ser His Lys Ser Gly Arg Arg Arg Trp Gly Gln Thr Ile
 385 390 395 400

Phe Lys Ser Gly Asp Ser Trp Glu Glu Leu Glu Asp Tyr Asp Phe Gly
 405 410 415

Ala Ser His Ser Lys Lys Pro Ser Met Gly Val Phe Lys Glu Lys Arg
420 425 430

Lys Lys Asp Ser Pro Phe Arg Leu Pro Glu Pro Val Pro Ser Gly Ser
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Asn His Ser Thr Gly Glu Asn Lys Ser Leu Pro Ala Val Thr Ser Leu
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Lys Ser Asp Ser Glu Leu Ser Thr Ala Pro Thr Ser Lys Gln Tyr Tyr
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Leu Lys Gln Ser Arg Tyr Leu Pro Gly Val Asn Pro Lys Lys Val Ser
485 490 495

Leu Ile Ala Ser Gly Lys Glu Ile Asn Pro His Thr Trp Ser Asn Gln
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Leu Phe Pro Lys Ser Leu Gly Pro Val Gly Ala Glu Leu Ala Phe Lys
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Arg Ser Asn Ala Gly Asn Leu Gly Ser Tyr Ala Thr Tyr Asn Gln Ser
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Gly Tyr Ile Pro Ser Phe Leu Lys Lys Glu Val Gln Ser Ala Gly Gln
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Arg Ile His Leu Ala Pro Leu Asn Ala Thr Ala Ser Glu Tyr Thr Trp
565 570 575

Asn Thr Lys Thr Gly Arg Gly Gln Phe Ser Gly Arg Thr Tyr Asn Pro
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<211> 333
<212> PRT
<213> Homo sapiens

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<400> 179

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Val Phe Leu Thr Gly Ile Leu Leu Asn Thr Leu Ala Leu Trp Val Phe

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Phe	Ser	Ser	Val	Ile	Phe	Tyr	Glu	Thr	Met	Tyr	Val	Gly	Ile	Val	Leu		
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Tyr	Thr	His	Ser	Gln	Thr	Asn	Asn	Lys	Thr	Asp	Cys	Arg	Leu	Gln	Asn		
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Gln Leu Phe Ile Ala Lys Glu Thr Thr Leu Phe Leu Ala Ala Thr Asn
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Ile Cys Met Asp Pro Leu Ile Tyr Ile Phe Leu Cys Lys Lys Phe Thr
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Glu Lys Leu Pro Cys Met Gln Gly Arg Lys Thr Thr Ala Ser Ser Gln
 305 310 315 320

Glu Asn His Ser Ser Gln Thr Asp Asn Ile Thr Leu Gly
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 <212> DNA
 <213> Homo sapiens

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<400> 181

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Met Ser Arg Arg Ala Ser Leu Ser Asp Ile Gly Phe Gly Lys Leu Glu
 35 40 45

Thr Tyr Val Lys Leu Asp Lys Leu Gly Glu Gly Thr Tyr Ala Thr Val
 50 55 60

Phe Lys Gly Arg Ser Lys Leu Thr Glu Asn Leu Val Ala Leu Lys Glu
 65 70 75 80

Ile Arg Leu Glu His Glu Glu Gly Ala Pro Cys Thr Ala Ile Arg Glu
 85 90 95

Val Ser Leu Leu Lys Asn Leu Lys His Ala Asn Ile Val Thr Leu His
 100 105 110

Asp Leu Ile His Thr Asp Arg Ser Leu Thr Leu Val Phe Glu Tyr Leu
 115 120 125

Asp Ser Asp Leu Lys Gln Tyr Leu Asp His Cys Gly Asn Leu Met Ser
 130 135 140

Met His Asn Val Lys Ile Phe Met Phe Gln Leu Leu Arg Gly Leu Ala
 145 150 155 160

Tyr Cys His Thr Arg Lys Ile Leu His Arg Asp Leu Lys Pro Gln Asn
165 170 175

Leu Leu Ile Asn Glu Arg Gly Glu Leu Lys Leu Ala Asp Phe Gly Leu
180 185 190

Ala Arg Ala Lys Ser Val Pro Thr Lys Thr Tyr Ser Asn Glu Val Val
195 200 205

Thr Leu Trp Tyr Arg Pro Pro Asp Val Leu Leu Gly Ser Thr Glu Tyr
210 215 220

Ser Thr Pro Ile Ala Met Trp Gly Val Gly Cys Ile His Tyr Glu Met
225 230 235 240

Ala Thr Gly Arg Pro Leu Phe Pro Gly Ser Thr Val Lys Glu Glu Leu
245 250 255

His Leu Ile Phe Arg Leu Leu Gly Thr Pro Thr Glu Glu Thr Trp Pro
260 265 270

Gly Val Thr Ala Phe Ser Glu Phe Arg Thr Tyr Ser Phe Pro Cys Tyr
275 280 285

Leu Pro Gln Pro Leu Ile Asn His Ala Pro Arg Leu Asp Thr Asp Gly
290 295 300

Ile His Leu Leu Ser Ser Leu Leu Val Tyr Glu Ser Lys Ser Arg Met
305 310 315 320

Ser Ala Glu Ala Ala Leu Ser His Ser Tyr Phe Arg Ser Leu Gly Glu
325 330 335

Arg Val His Gln Leu Glu Asp Thr Ala Ser Ile Phe Ser Leu Lys Glu
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Pro Gly Arg Gly Lys Asn Arg Arg Gln Ser Ile Phe
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<210> 182

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Ile Ala Ser Gly Cys Ser Trp Thr Leu Glu Asn Pro Asp Pro Thr Lys
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Tyr Ser Leu Tyr Leu Arg Phe Asn Arg Gln Glu Gln Val Cys Ala His
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Phe Ala Pro Arg Leu Leu Pro Leu Asp His Tyr Leu Val Asn Phe Thr
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Cys Leu Arg Pro Ser Pro Glu Glu Ala Val Ala Gln Ala Glu Ser Glu
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Val Gly Arg Pro Glu Glu Glu Glu Ala Glu Ala Ala Ala Gly Leu Glu
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Leu Cys Ser Gly Ser Gly Pro Phe Thr Phe Leu His Phe Asp Lys Asn
 130 135 140

Phe Val Gln Leu Cys Leu Ser Ala Glu Pro Ser Glu Ala Pro Arg Leu
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Asn Asn Asn Asn Ser Ser Gln Phe Thr Cys Gly Val Leu Cys Arg Trp
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Ser Glu Glu Cys Gly Arg Ala Ala Gly Arg Ala Cys Gly Phe Ala Gln
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Pro Gly Cys Ser Cys Pro Gly Glu Ala Gly Ala Gly Ser Thr Thr Thr
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 225 230 235 240

Pro Gly Gly Pro Ala Pro Pro Ala Glu Ala Asp Leu His Ser Gly Ser
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Ser Asn Asp Leu Phe Thr Thr Glu Met Arg Tyr Gly Glu Glu Pro Glu
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Gly Leu Tyr Met Ala Gln Thr Gly Asp Pro Ala Ala Glu Glu Trp Ser
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Gly Gly Lys Ala Cys Glu Gly Pro Glu Leu Gln Thr Lys Leu Cys Ser
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Gly Pro Cys Ser Thr Ser Cys Ala Asn Gly Thr Gln Gln Arg Ser Arg
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Lys Arg Cys Pro Ala Phe His Glu Met Cys Arg Asp Glu Tyr Val Met
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Leu Met Thr Trp Lys Lys Ala Ala Ala Gly Glu Ile Ile Tyr Asn Lys
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Ala Gln Gly Val Ala Tyr Trp Gly Leu Pro Ser Phe Ala Arg Cys Ile
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Ala	Thr	Tyr	Val	Pro	Ser	Ala	Asp	Asp	Val	Gln	Arg	Phe	Phe	Gln	Val
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915 920 925

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965 970 975

Arg Val Leu Ser Lys Gly Val Cys Thr Met Thr Ala Ala Phe Leu His
980 985 990

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Ala Val Ser Val Gly Phe Thr Arg Thr Lys Gly Tyr Gly Thr Ser
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<210> 185
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 <212> PRT
 <213> Homo sapiens

<400> 185

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His Phe Arg Glu Thr Leu Lys Ser His Glu Ala Glu Leu Asp Lys Thr
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Asn Lys Phe Ile Lys Glu Leu Ile Lys Asp Gly Lys Ser Leu Ile Ser
 35 40 45

Ala Leu Lys Asn Leu Ser Ser Ala Lys Arg Lys Phe Ala Asp Ser Leu
 50 55 60

Asn Glu Phe Lys Phe Gln Cys Ile Gly Asp Ala Glu Thr Asp Asp Glu
 65 70 75 80

Met Cys Ile Ala Arg Ser Leu Gln Glu Phe Ala Thr Val Leu Arg Asn
 85 90 95

Leu Glu Asp Glu Arg Ile Arg Met Ile Glu Asn Ala Ser Glu Val Leu
 100 105 110

Ile Thr Pro Leu Glu Lys Phe Arg Lys Glu Gln Ile Gly Ala Ala Lys
 115 120 125

Glu Ala Lys Lys Lys Tyr Asp Lys Glu Thr Glu Lys Tyr Cys Gly Ile
 130 135 140

Leu Glu Lys His Leu Asn Leu Ser Ser Lys Lys Lys Glu Ser Gln Leu
 145 150 155 160

Gln Glu Ala Asp Ser Gln Val Asp Leu Val Arg Gln His Phe Tyr Glu
 165 170 175

Val Ser Leu Glu Tyr Val Phe Lys Val Gln Glu Val Gln Glu Arg Lys
 180 185 190

Met Phe Glu Phe Val Glu Pro Leu Leu Ala Phe Leu Gln Gly Leu Phe
 195 200 205

Thr Phe Tyr His His Gly Tyr Glu Leu Ala Lys Asp Phe Gly Asp Phe
 210 215 220

Lys Thr Gln Leu Thr Ile Ser Ile Gln Asn Thr Arg Asn Arg Phe Glu
 225 230 235 240

Gly Thr Arg Ser Glu Val Glu Ser Leu Met Lys Lys Met Lys Glu Asn
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Pro Leu Glu His Lys Thr Ile Ser Pro Tyr Thr Met Glu Gly Tyr Leu
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Tyr Val Gln Glu Lys Arg His Phe Gly Thr Ser Trp Val Lys His Tyr

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Gln Lys Ser Gly Gly Lys Gly Gly Glu Asp Glu Ser Val Ile Leu Lys		
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Ser Cys Thr Arg Arg Lys Thr Asp Ser Ile Glu Lys Arg Phe Cys Phe		
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Asp Val Glu Ala Val Asp Arg Pro Gly Val Ile Thr Met Gln Ala Leu		
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Ser Glu Glu Asp Arg Arg Leu Trp Met Glu Ala Met Asp Gly Arg Glu		
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Pro Val Tyr Asn Ser Asn Lys Asp Ser Gln Ser Glu Gly Thr Ala Gln		
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Leu Asp Ser Ile Gly Phe Ser Ile Ile Arg Lys Cys Ile His Ala Val		
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Glu Thr Arg Gly Ile Asn Glu Gln Gly Leu Tyr Arg Ile Val Gly Val		
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Asn Ser Arg Val Gln Lys Leu Leu Ser Val Leu Met Asp Pro Lys Thr		
	420	425 430
Ala Ser Glu Thr Glu Thr Asp Ile Cys Ala Glu Trp Glu Ile Lys Thr		
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Ile Thr Ser Ala Leu Lys Thr Tyr Leu Arg Met Leu Pro Gly Pro Leu		
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Met Met Tyr Gln Phe Gln Arg Ser Phe Ile Lys Ala Ala Lys Leu Glu		
465	470	475 480
Asn Gln Glu Ser Arg Val Ser Glu Ile His Ser Leu Val His Arg Leu		
	485	490 495
Pro Glu Lys Asn Arg Gln Met Leu Gln Leu Leu Met Asn His Leu Ala		
	500	505 510

Asn	Val	Ala	Asn	Asn	His	Lys	Gln	Asn	Leu	Met	Thr	Val	Ala	Asn	Leu	515	520	525
Gly	Val	Val	Phe	Gly	Pro	Thr	Leu	Leu	Arg	Pro	Gln	Glu	Glu	Thr	Val	530	535	540
Ala	Ala	Ile	Met	Asp	Ile	Lys	Phe	Gln	Asn	Ile	Val	Ile	Glu	Ile	Leu	545	550	555
Ile	Glu	Asn	His	Glu	Lys	Ile	Phe	Asn	Thr	Val	Pro	Asp	Met	Pro	Leu	565	570	575
Thr	Asn	Ala	Gln	Leu	His	Leu	Ser	Arg	Lys	Lys	Ser	Ser	Asp	Ser	Lys	580	585	590
Pro	Pro	Ser	Cys	Ser	Glu	Arg	Pro	Leu	Thr	Leu	Phe	His	Thr	Val	Gln	595	600	605
Ser	Thr	Glu	Lys	Gln	Glu	Gln	Arg	Asn	Ser	Ile	Ile	Asn	Ser	Ser	Leu	610	615	620
Glu	Ser	Val	Ser	Ser	Asn	Pro	Asn	Ser	Ile	Leu	Asn	Ser	Ser	Ser	Ser	625	630	635
Leu	Gln	Pro	Asn	Met	Asn	Ser	Ser	Asp	Pro	Asp	Leu	Ala	Val	Val	Lys	645	650	655
Pro	Thr	Arg	Pro	Asn	Ser	Leu	Pro	Pro	Asn	Pro	Ser	Pro	Thr	Ser	Pro	660	665	670
Leu	Ser	Pro	Ser	Trp	Pro	Met	Phe	Ser	Ala	Pro	Ser	Ser	Pro	Met	Pro	675	680	685
Thr	Ser	Ser	Thr	Ser	Ser	Asp	Ser	Ser	Pro	Val	Arg	Ser	Val	Ala	Gly	690	695	700
Phe	Val	Trp	Phe	Ser	Val	Ala	Ala	Val	Val	Leu	Ser	Leu	Ala	Arg	Ser	705	710	715
Ser	Leu	His	Ala	Val	Phe	Ser	Leu	Leu	Val	Asn	Phe	Val	Pro	Cys	His	725	730	735

Pro Asn Leu His Leu Leu Phe Asp Arg Pro Glu Glu Ala Val His Glu
740 745 750

Asp Ser Ser Thr Pro Phe Arg Lys Ala Lys Ala Leu Tyr Ala Cys Lys
755 760 765

Ala Glu His Asp Ser Glu Leu Ser Phe Thr Ala Gly Thr Val Phe Asp
770 775 780

Asn Val His Pro Ser Gln Glu Pro Gly Trp Leu Glu Gly Thr Leu Asn
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<211> 2253
<212> DNA
<213> Homo sapiens

<400> 186
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<210> 187
 <211> 403
 <212> PRT
 <213> Homo sapiens

<400> 187

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Ala	Pro	Val	Gly	Gly	Pro	Lys	Arg	Val	Leu	Val	Thr	Gln	Gln	Ile	Pro	20	25	30
Cys	Gln	Asn	Pro	Leu	Pro	Val	Asn	Ser	Gly	Gln	Ala	Gln	Arg	Val	Leu	35	40	45
Cys	Pro	Ser	Asn	Ser	Ser	Gln	Arg	Val	Pro	Leu	Gln	Ala	Gln	Lys	Leu	50	55	60
Val	Ser	Ser	His	Lys	Pro	Val	Gln	Asn	Gln	Lys	Gln	Lys	Gln	Leu	Gln	65	70	75
Ala	Thr	Ser	Val	Pro	His	Pro	Val	Ser	Arg	Pro	Leu	Asn	Asn	Thr	Gln	85	90	95
Lys	Ser	Lys	Gln	Pro	Leu	Pro	Ser	Ala	Pro	Glu	Asn	Asn	Pro	Glu	Glu	100	105	110
Glu	Leu	Ala	Ser	Lys	Gln	Lys	Asn	Glu	Glu	Ser	Lys	Lys	Arg	Gln	Trp	115	120	125
Ala	Leu	Glu	Asp	Phe	Glu	Ile	Gly	Arg	Pro	Leu	Gly	Lys	Gly	Lys	Phe	130	135	140
Gly	Asn	Val	Tyr	Leu	Ala	Arg	Glu	Lys	Gln	Ser	Lys	Phe	Ile	Leu	Ala	145	150	155
Leu	Lys	Val	Leu	Phe	Lys	Ala	Gln	Leu	Glu	Lys	Ala	Gly	Val	Glu	His	165	170	175
Gln	Leu	Arg	Arg	Glu	Val	Glu	Ile	Gln	Ser	His	Leu	Arg	His	Pro	Asn	180	185	190
Ile	Leu	Arg	Leu	Tyr	Gly	Tyr	Phe	His	Asp	Ala	Thr	Arg	Val	Tyr	Leu	195	200	205
Ile	Leu	Glu	Tyr	Ala	Pro	Leu	Gly	Thr	Val	Tyr	Arg	Glu	Leu	Gln	Lys	210	215	220
Leu	Ser	Lys	Phe	Asp	Glu	Gln	Arg	Thr	Ala	Thr	Tyr	Ile	Thr	Glu	Leu	225	230	235

Ala Asn Ala Leu Ser Tyr Cys His Ser Lys Arg Val Ile His Arg Asp
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Ile Lys Pro Glu Asn Leu Leu Leu Gly Ser Ala Gly Glu Leu Lys Ile
 260 265 270

Ala Asp Phe Gly Trp Ser Val His Ala Pro Ser Ser Arg Arg Thr Thr
 275 280 285

Leu Cys Gly Thr Leu Asp Tyr Leu Pro Pro Glu Met Ile Glu Gly Arg
 290 295 300

Met His Asp Glu Lys Val Asp Leu Trp Ser Leu Gly Val Leu Cys Tyr
 305 310 315 320

Glu Phe Leu Val Gly Lys Pro Pro Phe Glu Ala Asn Thr Tyr Gln Glu
 325 330 335

Thr Tyr Lys Arg Ile Ser Arg Val Glu Phe Thr Phe Pro Asp Phe Val
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Thr Glu Gly Ala Arg Asp Leu Ile Ser Arg Leu Leu Lys His Asn Pro
 355 360 365

Ser Gln Arg Pro Met Leu Arg Glu Val Leu Glu His Pro Trp Ile Thr
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Ala Asn Ser Ser Lys Pro Ser Asn Cys Gln Asn Lys Glu Ser Ala Ser
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Lys Gln Ser

<210> 188

<211> 5228

<212> DNA

<213> Homo sapiens

<400> 188

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Asn Lys Lys Asn Leu Ala Lys Ser Gln Thr Leu Leu Gly Lys Glu Ile
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Lys Ile Leu Lys Glu Leu Lys His Glu Asn Ile Val Ala Leu Tyr Asp
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Phe Gln Glu Met Ala Asn Ser Val Tyr Leu Val Met Glu Tyr Cys Asn
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Gly Gly Asp Leu Ala Asp Tyr Leu His Ala Met Arg Thr Leu Ser Glu
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Asp Thr Ile Arg Leu Phe Leu Gln Gln Ile Ala Gly Ala Met Arg Leu
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Leu His Ser Lys Gly Ile Ile His Arg Asp Leu Lys Pro Gln Asn Ile
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Val Lys Ile Ala Asp Phe Gly Phe Ala Arg Tyr Leu Gln Ser Asn Met
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Ile Met Ser Gln His Tyr Asp Gly Lys Ala Asp Leu Trp Ser Ile Gly
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Thr Ile Val Tyr Gln Cys Leu Thr Gly Lys Ala Pro Phe Gln Ala Ser
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Ser Pro Gln Asp Leu Arg Leu Phe Tyr Glu Lys Asn Lys Thr Leu Val
 225 230 235 240

Pro Thr Ile Pro Arg Glu Thr Ser Ala Pro Leu Arg Gln Leu Leu Leu
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Phe His His Pro Phe Leu Asp Ala Ser Pro Ser Val Arg Lys Ser Pro
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Pro Val Pro Val Pro Ser Tyr Pro Ser Ser Gly Ser Gly Ser Ser Ser
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Met Gln Gln Leu Gln Lys Thr Leu Ala Ser Pro Ala Asp Thr Ala Gly
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Asp Thr Asp Asp Phe Val Met Val Pro Ala Gln Phe Pro Gly Asp Leu
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Gly Gly Gly Arg Pro Tyr Thr Pro Ser Pro Gln Val Gly Thr Ile Pro
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Pro Arg Thr Ser Gly Leu Gly Cys Arg Leu His Ser Ala Pro Asn Leu
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Ser His Gly Leu Gln Ser Cys Arg Asn Leu Arg Gly Ser Pro Lys Leu
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Pro Asp Phe Leu Gln Arg Asn Pro Leu Pro Pro Ile Leu Gly Ser Pro
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Thr Lys Ala Val Pro Ser Phe Asp Phe Pro Lys Thr Pro Ser Ser Gln
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Asn Leu Leu Ala Leu Leu Ala Arg Gln Gly Val Val Met Thr Pro Pro
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Arg Asn Arg Thr Leu Pro Asp Leu Ser Glu Val Gly Pro Phe His Gly

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Gly Leu Gln Ser Ala Ile Asp Gln Ile Arg Ala Gly Lys Leu Cys Leu
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Ser Ser Thr Val Lys Gln Val Val Arg Arg Leu Asn Glu Leu Tyr Lys
930 935 940

Ala Ser Val Val Ser Cys Gln Gly Leu Ser Leu Arg Leu Gln Arg Phe
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Phe Leu Asp Lys Gln Arg Leu Leu Asp Arg Ile His Ser Ile Thr Ala
965 970 975

Glu Arg Leu Ile Phe Ser His Ala Val Gln Met Val Gln Ser Ala Ala
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Leu Asp Glu Met Phe Gln His Arg Glu Gly Cys Val Pro Arg Tyr His
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Lys Ala Leu Leu Leu Leu Glu Gly Leu Gln His Met Leu Ser Asp
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 Val Ala Tyr Cys Leu Arg Glu Arg Gly Ala Lys His Glu Ala Trp Leu
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Gln Ser Pro Arg His Ser Ser Ala Leu Arg Gln Leu Leu Asn Ser Met
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<210> 193
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 <212> PRT
 <213> Homo sapiens

<400> 193

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Asp Gly Gly Asp Gly Gly Glu Gln Leu Leu Thr Val Lys His Glu Leu

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Phe Glu Leu Leu Lys Val Leu Gly Thr Gly Ala Tyr Gly Lys Val Phe 50 55 60		
Leu Val Arg Lys Ile Ser Gly His Asp Thr Gly Lys Leu Tyr Ala Met 65 70 75 80		
Lys Val Leu Lys Lys Ala Thr Ile Val Gln Lys Ala Lys Thr Thr Glu 85 90 95		
His Thr Arg Thr Glu Arg Gln Val Leu Glu His Ile Arg Gln Ser Pro 100 105 110		
Phe Leu Val Thr Leu His Tyr Ala Phe Gln Thr Glu Thr Lys Leu His 115 120 125		
Leu Ile Leu Asp Tyr Ile Asn Gly Gly Glu Leu Phe Thr His Leu Ser 130 135 140		
Gln Arg Glu Arg Phe Thr Glu His Glu Val Gln Ile Tyr Val Gly Glu 145 150 155 160		
Ile Val Leu Ala Leu Glu His Leu His Lys Leu Gly Ile Ile Tyr Arg 165 170 175		
Asp Ile Lys Leu Glu Asn Ile Leu Leu Asp Ser Asn Gly His Val Val 180 185 190		
Leu Thr Asp Phe Gly Leu Ser Lys Glu Phe Val Ala Asp Glu Thr Glu 195 200 205		
Arg Ala Tyr Ser Phe Cys Gly Thr Ile Glu Tyr Met Ala Pro Asp Ile 210 215 220		
Val Arg Gly Gly Asp Ser Gly His Asp Lys Ala Val Asp Trp Trp Ser 225 230 235 240		
Leu Gly Val Leu Met Tyr Glu Leu Leu Thr Gly Ala Ser Pro Phe Thr 245 250 255		

Val Asp Gly Glu Lys Asn Ser Gln Ala Glu Ile Ser Arg Arg Ile Leu
 260 265 270

Lys Ser Glu Pro Pro Tyr Pro Gln Glu Met Ser Ala Leu Ala Lys Asp
 275 280 285

Leu Ile Gln Arg Leu Leu Met Lys Asp Pro Lys Lys Arg Leu Gly Cys
 290 295 300

Gly Pro Arg Asp Ala Asp Glu Ile Lys Glu His Leu Phe Phe Gln Lys
 305 310 315 320

Ile Asn Trp Asp Asp Leu Ala Ala Lys Lys Val Pro Ala Pro Phe Lys
 325 330 335

Pro Val Ile Arg Asp Glu Leu Asp Val Ser Asn Phe Ala Glu Glu Phe
 340 345 350

Thr Glu Met Asp Pro Thr Tyr Ser Pro Ala Ala Leu Pro Gln Ser Ser
 355 360 365

Glu Lys Leu Phe Gln Gly Tyr Ser Phe Val Ala Pro Ser Ile Leu Phe
 370 375 380

Lys Arg Asn Ala Ala Val Ile Asp Pro Leu Gln Phe His Met Gly Val
 385 390 395 400

Glu Arg Pro Gly Val Thr Asn Val Ala Arg Ser Ala Met Met Lys Asp
 405 410 415

Ser Pro Phe Tyr Gln His Tyr Asp Leu Asp Leu Lys Asp Lys Pro Leu
 420 425 430

Gly Glu Gly Ser Phe Ser Ile Cys Arg Lys Cys Val His Lys Lys Ser
 435 440 445

Asn Gln Ala Leu Gln Val Lys Ile Ile Ser Lys Arg Met Glu Ala Asn
 450 455 460

Thr Gln Lys Glu Ile Thr Ala Leu Lys Leu Cys Glu Gly His Pro Asn
 465 470 475 480

Ile Val Lys Leu His Glu Val Phe His Asp Gln Leu His Thr Phe Leu
 485 490 495

Val Met Glu Leu Leu Asn Gly Gly Glu Leu Phe Asp Ala Leu Arg Lys
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Lys Lys His Phe Ser Glu Thr Glu Ala Ser Tyr Ile Met Arg Lys Leu
 515 520 525

Val Ser Ala Leu Ser His Met His Asp Leu Gly Val Val His Arg Asp
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Leu Lys Pro Glu Asn Leu Leu Phe Thr Asp Glu Asn Asp Asn Leu Glu
 545 550 555 560

Ile Lys Ile Ile Asp Phe Gly Phe Ala Arg Leu Lys Pro Pro Asp Asn
 565 570 575

Gln Pro Leu Lys Thr Pro Cys Phe Thr Leu His Ser Cys Arg Pro Glu
 580 585 590

Leu Leu Asn Gln Asn Gly Tyr Asp Glu Ser Cys Asp Leu Trp Ser Leu
 595 600 605

Gly Val Ile Leu Tyr Thr Met Leu Ser Gly Gln Val Pro Phe Gln Ser
 610 615 620

His Asp Arg Ser Leu Thr Cys Thr Ser Ala Val Glu Ile Met Lys Lys
 625 630 635 640

Ile Lys Lys Gly Asp Phe Ser Phe Glu Gly Glu Ala Trp Lys Asn Val
 645 650 655

Ser Gln Glu Ala Lys Asp Leu Ile Gln Gly Leu Leu Thr Val Asp Pro
 660 665 670

Asn Lys Arg Leu Lys Met Ser Gly Leu Arg Tyr Asn Glu Trp Leu Gln
 675 680 685

Asp Gly Ser Gln Leu Ser Ser Asn Pro Leu Met Thr Pro Asp Ile Leu
 690 695 700

Gly Ser Ser Gly Ala Ala Val His Thr Cys Val Lys Ala Thr Phe His
705 710 715 720

Ala Phe Asn Lys Tyr Lys Arg Glu Gly Phe Cys Leu Gln Asn Val Asp
725 730 735

Lys Ala Pro Leu Ala Lys Arg Arg Lys Met Lys Lys Thr Ser Thr Ser
740 745 750

Thr Glu Thr Arg Arg Gly Ser Ser Glu Ser Ser His Ser Ser Ser Ser
755 760 765

His Ser His Gly Lys Thr Thr Pro Thr Lys Thr Leu Gln Pro Ser Asn
770 775 780

Pro Ala Asp Ser Asn Asn Pro Glu Thr Leu Phe Gln Phe Ser Asp Ser
785 790 795 800

Glu Leu Arg His Gly Arg Ser Asp Gln
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<210> 194
<211> 3327
<212> DNA
<213> Homo sapiens

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<210> 195
<211> 749
<212> PRT
<213> Homo sapiens

<400> 195

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Ala Arg Phe Thr Gly Val Gly Val Ser Lys Gly Pro Leu Asn Ser Glu
20 25 30

Ser Ser Asn Gln Ser Leu Cys Ser Val Gly Ser Leu Ser Asp Lys Glu
35 40 45

Val Glu Thr Pro Glu Lys Lys Gln Asn Asp Gln Arg Asn Arg Lys Arg
50 55 60

Lys Ala Glu Pro Tyr Glu Thr Ser Gln Gly Lys Gly Thr Pro Arg Gly

65		70		75		80									
His	Lys	Ile	Ser	Asp	Tyr	Phe	Glu	Phe	Ala	Gly	Gly	Ser	Ala	Pro	Gly
			85						90					95	
Thr	Ser	Pro	Gly	Arg	Ser	Val	Pro	Pro	Val	Ala	Arg	Ser	Ser	Pro	Gln
			100					105					110		
His	Ser	Leu	Ser	Asn	Pro	Leu	Pro	Arg	Arg	Val	Glu	Gln	Pro	Leu	Tyr
		115					120					125			
Gly	Leu	Asp	Gly	Ser	Ala	Ala	Lys	Glu	Ala	Thr	Glu	Glu	Gln	Ser	Ala
	130					135					140				
Leu	Pro	Thr	Leu	Met	Ser	Val	Met	Leu	Ala	Lys	Pro	Arg	Leu	Asp	Thr
145					150					155					160
Glu	Gln	Leu	Ala	Gln	Arg	Gly	Ala	Gly	Leu	Cys	Phe	Thr	Phe	Val	Ser
				165					170					175	
Ala	Gln	Gln	Asn	Ser	Pro	Ser	Ser	Thr	Gly	Ser	Gly	Asn	Thr	Glu	His
			180					185					190		
Ser	Cys	Ser	Ser	Gln	Lys	Gln	Ile	Ser	Ile	Gln	His	Arg	Arg	Thr	Gln
		195					200					205			
Ser	Asp	Leu	Thr	Ile	Glu	Lys	Ile	Ser	Ala	Leu	Glu	Asn	Ser	Lys	Asn
	210					215					220				
Ser	Asp	Leu	Glu	Lys	Lys	Glu	Gly	Arg	Ile	Asp	Asp	Leu	Leu	Arg	Ala
225					230					235					240
Asn	Cys	Asp	Leu	Arg	Arg	Gln	Ile	Asp	Glu	Gln	Gln	Lys	Met	Leu	Glu
			245						250					255	
Lys	Tyr	Lys	Glu	Arg	Leu	Asn	Arg	Cys	Val	Thr	Met	Ser	Lys	Lys	Leu
		260						265					270		
Leu	Ile	Glu	Lys	Ser	Lys	Gln	Glu	Lys	Met	Ala	Cys	Arg	Asp	Lys	Ser
	275						280					285			
Met	Gln	Asp	Arg	Leu	Arg	Leu	Gly	His	Phe	Thr	Thr	Val	Arg	His	Gly
	290					295					300				

Ala Ser Phe Thr Glu Gln Trp Thr Asp Gly Tyr Ala Phe Gln Asn Leu
 305 310 315 320

Ile Lys Gln Gln Glu Arg Ile Asn Ser Gln Arg Glu Glu Ile Glu Arg
 325 330 335

Gln Arg Lys Met Leu Ala Lys Arg Lys Pro Pro Ala Met Gly Gln Ala
 340 345 350

Pro Pro Ala Thr Asn Glu Gln Lys Gln Arg Lys Ser Lys Thr Asn Gly
 355 360 365

Ala Glu Asn Glu Thr Leu Thr Leu Ala Glu Tyr His Glu Gln Glu Glu
 370 375 380

Ile Phe Lys Leu Arg Leu Gly His Leu Lys Lys Glu Glu Ala Glu Ile
 385 390 395 400

Gln Ala Glu Leu Glu Arg Leu Glu Arg Val Arg Asn Leu His Ile Arg
 405 410 415

Glu Leu Lys Arg Ile His Asn Glu Asp Asn Ser Gln Phe Lys Asp His
 420 425 430

Pro Thr Leu Asn Asp Arg Tyr Leu Leu Leu His Leu Leu Gly Arg Gly
 435 440 445

Gly Phe Ser Glu Val Tyr Lys Ala Phe Asp Leu Thr Glu Gln Arg Tyr
 450 455 460

Val Ala Val Lys Ile His Gln Leu Asn Lys Asn Trp Arg Asp Glu Lys
 465 470 475 480

Lys Glu Asn Tyr His Lys His Ala Cys Arg Glu Tyr Arg Ile His Lys
 485 490 495

Glu Leu Asp His Pro Arg Ile Val Lys Leu Tyr Asp Tyr Phe Ser Leu
 500 505 510

Asp Thr Asp Ser Phe Cys Thr Val Leu Glu Tyr Cys Glu Gly Asn Asp
 515 520 525

Leu Asp Phe Tyr Leu Lys Gln His Lys Leu Met Ser Glu Lys Glu Ala
 530 535 540

Arg Ser Ile Ile Met Gln Ile Val Asn Ala Leu Lys Tyr Leu Asn Glu
 545 550 555 560

Ile Lys Pro Pro Ile Ile His Tyr Asp Leu Lys Pro Gly Asn Ile Leu
 565 570 575

Leu Val Asn Gly Thr Ala Cys Gly Glu Ile Lys Ile Thr Asp Phe Gly
 580 585 590

Leu Ser Lys Ile Met Asp Asp Asp Ser Tyr Asn Ser Val Asp Gly Met
 595 600 605

Glu Leu Thr Ser Gln Gly Ala Gly Thr Tyr Trp Tyr Leu Pro Pro Glu
 610 615 620

Cys Phe Val Val Gly Lys Glu Pro Pro Lys Ile Ser Asn Lys Val Asp
 625 630 635 640

Val Trp Ser Val Gly Val Ile Phe Tyr Gln Cys Leu Tyr Gly Arg Lys
 645 650 655

Pro Phe Gly His Asn Gln Ser Gln Gln Asp Ile Leu Gln Glu Asn Thr
 660 665 670

Ile Leu Lys Ala Thr Glu Val Gln Phe Pro Pro Lys Pro Val Val Thr
 675 680 685

Pro Glu Ala Lys Ala Phe Ile Arg Arg Cys Leu Ala Tyr Arg Lys Arg
 690 695 700

Asp Arg Ile Asp Val Gln Gln Leu Ala Cys Asp Pro Tyr Leu Leu Pro
 705 710 715 720

His Ile Arg Lys Ser Val Ser Thr Ser Ser Pro Ala Gly Ala Ala Ile
 725 730 735

Ala Ser Thr Ser Gly Ala Ser Asn Asn Ser Ser Ser Asn
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 <211> 2221
 <212> DNA
 <213> Homo sapiens

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 acaacaggaa ttttctccga gagcggggccg ggctcagttc agctgctgtc cagaccgcga 180
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<210> 197
<211> 452
<212> PRT
<213> Homo sapiens

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<400> 197

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Arg Glu Arg Ala Gly Leu Ser Ser Ala Ala Val Gln Thr Arg Ile Gly
20          25          30

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```

Asn Ser Ala Ala Ser Arg Arg Ser Pro Ala Ala Arg Pro Pro Val Pro
35          40          45

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Ala Pro Pro Ala Leu Pro Arg Gly Arg Pro Gly Thr Glu Gly Ser Thr
50          55          60

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Ser Leu Ser Ala Pro Ala Val Leu Val Val Ala Val Ala Val Val Val
65          70          75          80

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Val Val Val Ser Ala Val Ala Trp Ala Met Ala Asn Tyr Ile His Val
85          90          95

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Pro Pro Gly Ser Pro Glu Val Pro Lys Leu Asn Val Thr Val Gln Asp
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Gln Glu Glu His Arg Cys Arg Glu Gly Ala Leu Ser Leu Leu Gln His
 115 120 125

Leu Arg Pro His Trp Asp Pro Gln Glu Val Thr Leu Gln Leu Phe Thr
 130 135 140

Asp Gly Ile Thr Asn Lys Leu Ile Gly Cys Tyr Val Gly Asn Thr Met
 145 150 155 160

Glu Asp Val Val Leu Val Arg Ile Tyr Gly Asn Lys Thr Glu Leu Leu
 165 170 175

Val Asp Arg Asp Glu Glu Val Lys Ser Phe Arg Val Leu Gln Ala His
 180 185 190

Gly Cys Ala Pro Gln Leu Tyr Cys Thr Phe Asn Asn Gly Leu Cys Tyr
 195 200 205

Glu Phe Ile Gln Gly Glu Ala Leu Asp Pro Lys His Val Cys Asn Pro
 210 215 220

Ala Ile Phe Arg Leu Ile Ala Arg Gln Leu Ala Lys Ile His Ala Ile
 225 230 235 240

His Ala His Asn Gly Trp Ile Pro Lys Ser Asn Leu Trp Leu Lys Met
 245 250 255

Gly Lys Tyr Phe Ser Leu Ile Pro Thr Gly Phe Ala Asp Glu Asp Ile
 260 265 270

Asn Lys Arg Phe Leu Ser Asp Ile Pro Ser Ser Gln Ile Leu Gln Glu
 275 280 285

Glu Met Thr Trp Met Lys Glu Ile Leu Ser Asn Leu Gly Ser Pro Val
 290 295 300

Val Leu Cys His Asn Asp Leu Leu Cys Lys Asn Ile Ile Tyr Asn Glu
 305 310 315 320

Lys Gln Gly Asp Val Gln Phe Ile Asp Tyr Glu Tyr Ser Gly Tyr Asn

325	330	335
Tyr Leu Ala Tyr Asp Ile Gly Asn His Phe Asn Glu Phe Ala Gly Val		
340	345	350
Ser Asp Val Asp Tyr Ser Leu Tyr Pro Asp Arg Glu Leu Gln Ser Gln		
355	360	365
Trp Leu Arg Ala Tyr Leu Glu Ala Tyr Lys Glu Phe Lys Gly Phe Gly		
370	375	380
Thr Glu Val Thr Glu Lys Glu Val Glu Ile Leu Phe Ile Gln Val Asn		
385	390	395
Gln Phe Ala Leu Ala Ser His Phe Phe Trp Gly Leu Trp Ala Leu Ile		
405	410	415
Gln Ala Lys Tyr Ser Thr Ile Glu Phe Asp Phe Leu Gly Tyr Ala Ile		
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Val Arg Phe Asn Gln Tyr Phe Lys Met Lys Pro Glu Val Thr Ala Leu		
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Lys Val Pro Glu		
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<211> 465
<212> PRT
<213> Homo sapiens

<400> 199

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Arg Gly Arg Ala Thr Asp Ser Leu Pro Gly Lys Phe Glu Asp Met Tyr
35 40 45

Lys Leu Thr Ser Glu Leu Leu Gly Glu Gly Ala Tyr Ala Lys Val Gln
50 55 60

Gly Ala Val Ser Leu Gln Asn Gly Lys Glu Tyr Ala Val Lys Ile Ile
65 70 75 80

Glu Lys Gln Ala Gly His Ser Arg Ser Arg Val Phe Arg Glu Val Glu
85 90 95

Thr Leu Tyr Gln Cys Gln Gly Asn Lys Asn Ile Leu Glu Leu Ile Glu
100 105 110

Phe Phe Glu Asp Asp Thr Arg Phe Tyr Leu Val Phe Glu Lys Leu Gln
115 120 125

Gly Gly Ser Ile Leu Ala His Ile Gln Lys Gln Lys His Phe Asn Glu
 130 135 140

Arg Glu Ala Ser Arg Val Val Arg Asp Val Ala Ala Ala Leu Asp Phe
 145 150 155 160

Leu His Thr Lys Asp Lys Val Ser Leu Cys His Leu Gly Trp Ser Ala
 165 170 175

Met Ala Pro Ser Gly Leu Thr Ala Ala Pro Thr Ser Leu Gly Ser Ser
 180 185 190

Asp Pro Pro Thr Ser Ala Ser Gln Val Ala Gly Thr Thr Gly Ile Ala
 195 200 205

His Arg Asp Leu Lys Pro Glu Asn Ile Leu Cys Glu Ser Pro Glu Lys
 210 215 220

Val Ser Pro Val Lys Ile Cys Asp Phe Asp Leu Gly Ser Gly Met Lys
 225 230 235 240

Leu Asn Asn Ser Cys Thr Pro Ile Thr Thr Pro Glu Leu Thr Thr Pro
 245 250 255

Cys Gly Ser Ala Glu Tyr Met Ala Pro Glu Val Val Glu Val Phe Thr
 260 265 270

Asp Gln Ala Thr Phe Tyr Asp Lys Arg Cys Asp Leu Trp Ser Leu Gly
 275 280 285

Val Val Leu Tyr Ile Met Leu Ser Gly Tyr Pro Pro Phe Val Gly His
 290 295 300

Cys Gly Ala Asp Cys Gly Trp Asp Arg Gly Glu Val Cys Arg Val Cys
 305 310 315 320

Gln Asn Lys Leu Phe Glu Ser Ile Gln Glu Gly Lys Tyr Glu Phe Pro
 325 330 335

Asp Lys Asp Trp Ala His Ile Ser Ser Glu Ala Lys Asp Leu Ile Ser
 340 345 350

Lys Leu Leu Val Arg Asp Ala Lys Gln Arg Leu Ser Ala Ala Gln Val
 355 360 365

Leu Gln His Pro Trp Val Gln Gly Gln Ala Pro Glu Lys Gly Leu Pro
 370 375 380

Thr Pro Gln Val Leu Gln Arg Asn Ser Ser Thr Met Asp Leu Thr Leu
 385 390 395 400

Phe Ala Ala Glu Ala Ile Ala Leu Asn Arg Gln Leu Ser Gln His Glu
 405 410 415

Glu Asn Glu Leu Ala Glu Glu Pro Glu Ala Leu Ala Asp Gly Leu Cys
 420 425 430

Ser Met Lys Leu Ser Pro Pro Cys Lys Ser Arg Leu Ala Arg Arg Arg
 435 440 445

Ala Leu Ala Gln Ala Gly Arg Gly Glu Asp Arg Ser Pro Pro Thr Ala
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Leu
 465

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 <212> DNA
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 gaaattccca ttttaatcat cgaagggtttt cttcttttta attataagcc ccttgacact 540

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<210> 201
<211> 199
<212> PRT
<213> Homo sapiens

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<400> 201

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Thr Thr Leu Ala Lys Asn Leu Gln Lys His Leu Pro Asn Cys Ser Val
          20           25           30

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Ile Ser Gln Asp Asp Phe Phe Lys Pro Glu Ser Glu Ile Glu Thr Asp
          35           40           45

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Lys Asn Gly Phe Leu Gln Tyr Asp Val Leu Glu Ala Leu Asn Met Glu
          50           55           60

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Lys Met Met Ser Ala Ile Ser Cys Trp Met Glu Ser Ala Arg His Ser
65           70           75           80

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Val Val Ser Thr Asp Gln Glu Ser Ala Glu Glu Ile Pro Ile Leu Ile
          85           90           95

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Ile Glu Gly Phe Leu Leu Phe Asn Tyr Lys Pro Leu Asp Thr Ile Trp
          100          105          110

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Asn Arg Ser Tyr Phe Leu Thr Ile Pro Tyr Glu Glu Cys Lys Arg Arg
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Arg Ser Thr Arg Val Tyr Gln Pro Pro Asp Ser Pro Gly Tyr Phe Asp
 130 135 140

Gly His Val Trp Pro Met Tyr Leu Lys Tyr Arg Gln Glu Met Gln Asp
 145 150 155 160

Ile Thr Trp Glu Val Val Tyr Leu Asp Gly Thr Lys Ser Glu Glu Asp
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Leu Phe Leu Gln Val Tyr Glu Asp Leu Ile Gln Glu Leu Ala Lys Gln
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Lys Cys Leu Gln Val Thr Ala
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 <213> Homo sapiens

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 <212> DNA
 <213> Homo sapiens

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<211> 270

<212> PRT

<213> Homo sapiens

<400> 204

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Ile	Phe	Pro	His	Val	Val	His	Gly	Phe	Leu	Asp	Thr	Asn	Pro	Ala	Ile
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Arg	Glu	Gln	Thr	Val	Lys	Ser	Met	Leu	Leu	Leu	Ala	Pro	Lys	Leu	Asn
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Glu	Ala	Asn	Leu	Asn	Val	Glu	Leu	Met	Lys	His	Phe	Ala	Arg	Leu	Gln
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Ala	Lys	Asp	Glu	Gln	Gly	Pro	Ile	Arg	Cys	Asn	Thr	Thr	Val	Cys	Leu
				85					90					95	
Gly	Lys	Ile	Gly	Ser	Tyr	Leu	Ser	Ala	Ser	Thr	Arg	His	Arg	Val	Leu
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Thr	Ser	Ala	Phe	Ser	Arg	Ala	Thr	Arg	Asp	Pro	Phe	Ala	Pro	Ser	Arg
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Asp	Pro	Glu	Lys	Ser	Val	Arg	Asp	Gln	Ala	Phe	Lys	Ala	Phe	Arg	Ser
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Ala	Ala	Ala	Ser	Trp	Ala	Gly	Trp	Ala	Trp	Thr	Gly	Val	Ser	Ser	Leu
	210					215					220				
Thr	Ser	Lys	Leu	Ile	Arg	Ser	His	Pro	Thr	Thr	Ala	Pro	Thr	Glu	Thr
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Ala Gly Gly Gly Gln Gly His Ser Arg Gly Gln Gln His Cys
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<210> 205
<211> 6782
<212> DNA
<213> Homo sapiens

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Asp Lys Tyr Val Ala Glu Phe Leu Glu Trp Ala Lys Pro Phe Thr Gln
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Leu Val Lys Glu Met Gln Leu His Arg Glu Asp Phe Glu Ile Ile Lys
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Val Ile Gly Arg Gly Ala Phe Gly Glu Val Ala Val Val Lys Met Lys
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Asn Thr Glu Arg Ile Tyr Ala Met Lys Ile Leu Asn Lys Trp Glu Met
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	180		185	190
Gln Leu His Tyr Val His Arg Asp Ile Lys Pro Asp Asn Val Leu Leu				
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Ser Ile Met Gln Ser Asn Thr Leu Thr Lys Asp Glu Asp Val Gln Arg
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Ala Gly Ala Thr Leu Glu His Gln Gln Glu Ile Ser Lys Ile Lys Ser
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Glu Leu Glu Lys Lys Val Leu Phe Tyr Glu Glu Glu Leu Val Arg Arg
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Glu Ala Ser His Val Leu Glu Val Lys Asn Val Lys Lys Glu Val His
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 ttgcaaatat tagttctttt acgaagtcatt cctcaagctt caattttattt ataacgatga 1140
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<210> 208
 <211> 322

<212> PRT

<213> Homo sapiens

<400> 208

Met Ala Ala Ser Gly Glu Pro Gln Arg Gln Trp Gln Glu Glu Val Ala
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Ala Val Val Val Val Gly Ser Cys Met Thr Asp Leu Val Ser Leu Thr
20 25 30

Ser Arg Leu Pro Lys Thr Gly Glu Thr Ile His Gly His Lys Phe Phe
35 40 45

Ile Gly Phe Gly Gly Lys Gly Ala Asn Gln Cys Val Gln Ala Ala Arg
50 55 60

Leu Gly Ala Met Thr Ser Met Val Cys Lys Val Gly Lys Asp Ser Phe
65 70 75 80

Gly Asn Asp Tyr Ile Glu Asn Leu Lys Gln Asn Asp Ile Ser Thr Glu
85 90 95

Phe Thr Tyr Gln Thr Lys Asp Ala Ala Thr Gly Thr Ala Ser Ile Ile
100 105 110

Val Asn Asn Glu Gly Gln Asn Ile Ile Val Ile Val Ala Gly Ala Asn
115 120 125

Leu Leu Leu Asn Thr Glu Asp Leu Arg Ala Ala Ala Asn Val Ile Ser
130 135 140

Arg Ala Lys Val Met Val Cys Gln Leu Glu Ile Thr Pro Ala Thr Ser
145 150 155 160

Leu Glu Ala Leu Thr Met Ala Arg Arg Ser Gly Val Lys Thr Leu Phe
165 170 175

Asn Pro Ala Pro Ala Ile Ala Asp Leu Asp Pro Gln Phe Tyr Thr Leu
180 185 190

Ser Asp Val Phe Cys Cys Asn Glu Ser Glu Ala Glu Ile Leu Thr Gly
195 200 205

Leu Thr Val Gly Ser Ala Ala Asp Ala Gly Glu Ala Ala Leu Val Leu
 210 215 220

Leu Lys Arg Gly Cys Gln Val Val Ile Ile Thr Leu Gly Ala Glu Gly
 225 230 235 240

Cys Val Val Leu Ser Gln Thr Glu Pro Glu Pro Lys His Ile Pro Thr
 245 250 255

Glu Lys Val Lys Ala Val Asp Thr Thr Gly Ala Gly Asp Ser Phe Val
 260 265 270

Gly Ala Leu Ala Phe Tyr Leu Ala Tyr Tyr Pro Asn Leu Ser Leu Glu
 275 280 285

Asp Met Leu Asn Arg Ser Asn Phe Ile Ala Ala Val Ser Val Gln Ala
 290 295 300

Ala Gly Thr Gln Ser Ser Tyr Pro Tyr Lys Lys Asp Leu Pro Leu Thr
 305 310 315 320

Leu Phe

<210> 209
 <211> 1566
 <212> DNA
 <213> Homo sapiens

<400> 209
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 ggtggccgcc agctgcctgg tgggtgctgga gaacttgctg gtgctggcgg ccatcaccag 240
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aaaaaa 1566

<210> 210
<211> 384
<212> PRT
<213> Homo sapiens

<400> 210

Met Asn Ala Thr Gly Thr Pro Val Ala Pro Glu Ser Cys Gln Gln Leu
1 5 10 15

Ala Ala Gly Gly His Ser Arg Leu Ile Val Leu His Tyr Asn His Ser
20 25 30

Gly Arg Leu Ala Gly Arg Gly Gly Pro Glu Asp Gly Gly Leu Gly Ala
35 40 45

Leu Arg Gly Leu Ser Val Ala Ala Ser Cys Leu Val Val Leu Glu Asn
50 55 60

Leu Leu Val Leu Ala Ala Ile Thr Ser His Met Arg Ser Arg Arg Trp
 65 70 75 80

Val Tyr Tyr Cys Leu Val Asn Ile Thr Leu Ser Asp Leu Leu Thr Gly
 85 90 95

Ala Ala Tyr Leu Ala Asn Val Leu Leu Ser Gly Ala Arg Thr Phe Arg
 100 105 110

Leu Ala Pro Ala Gln Trp Phe Leu Arg Glu Gly Leu Leu Phe Thr Ala
 115 120 125

Leu Ala Ala Ser Thr Phe Ser Leu Leu Phe Thr Ala Gly Glu Arg Phe
 130 135 140

Ala Thr Met Val Arg Pro Val Ala Glu Ser Gly Ala Thr Lys Thr Ser
 145 150 155 160

Arg Val Tyr Gly Phe Ile Gly Leu Cys Trp Leu Leu Ala Ala Leu Leu
 165 170 175

Gly Met Leu Pro Leu Leu Gly Trp Asn Cys Leu Cys Ala Phe Asp Arg
 180 185 190

Cys Ser Ser Leu Leu Pro Leu Tyr Ser Lys Arg Tyr Ile Leu Phe Cys
 195 200 205

Leu Val Ile Phe Ala Gly Val Leu Ala Thr Ile Met Gly Leu Tyr Gly
 210 215 220

Ala Ile Phe Arg Leu Val Gln Ala Ser Gly Gln Lys Ala Pro Arg Pro
 225 230 235 240

Ala Ala Arg Arg Lys Ala Arg Arg Leu Leu Lys Thr Val Leu Met Ile
 245 250 255

Leu Leu Ala Phe Leu Val Cys Trp Gly Pro Leu Phe Gly Leu Leu Leu
 260 265 270

Ala Asp Val Phe Gly Ser Asn Leu Trp Ala Gln Glu Tyr Leu Arg Gly
 275 280 285

Met Asp Trp Ile Leu Ala Leu Ala Val Leu Asn Ser Ala Val Asn Pro
 290 295 300

Ile Ile Tyr Ser Phe Arg Ser Arg Glu Val Cys Arg Ala Val Leu Ser
 305 310 315 320

Phe Leu Cys Cys Gly Cys Leu Arg Leu Gly Met Arg Gly Pro Gly Asp
 325 330 335

Cys Leu Ala Arg Ala Val Glu Ala His Ser Gly Ala Ser Thr Thr Asp
 340 345 350

Ser Ser Leu Arg Pro Arg Asp Ser Phe Arg Gly Ser Arg Ser Leu Ser
 355 360 365

Phe Arg Met Arg Glu Pro Leu Ser Ser Ile Ser Ser Val Arg Ser Ile
 370 375 380

<210> 211
 <211> 3000
 <212> DNA
 <213> Homo sapiens

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<400> 211
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 tgctgggctc aggaggccgc gcgcgccccg ggccggggcc ggggccggga cngaccgag 180
 cgggcggcgt cagagccccg gcccggtgccg cgccgggaca cagcttcagg aaggtgacgc 240
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aggggaacct gccctcggga gcgcgctgcg aggtctgcag gaagacgtgc ggctcctctg	660
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agacacaggc aactccggag tccgggaagc aaacgctgaa gatctttgat ggcgacgacg	960
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gccggctgcc cccttcctct caggcctgtg acgcctgggc tgggggcaag gctgggagtg	1140
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<210> 212
 <211> 942
 <212> PRT
 <213> Homo sapiens

<400> 212

Met Ala Ala Ala Ala Glu Pro Gly Ala Arg Ala Trp Leu Gly Gly Gly
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Ser Pro Arg Pro Gly Ser Pro Ala Cys Ser Pro Val Leu Gly Ser Gly
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Gly Arg Ala Arg Pro Gly Pro Gly Pro Gly Pro Gly Arg Asp Arg Ala
 35 40 45

Gly Gly Val Arg Ala Arg Ala Arg Ala Ala Pro Gly His Ser Phe Arg
 50 55 60

Lys Val Thr Leu Thr Lys Pro Thr Phe Cys His Leu Cys Ser Asp Phe
 65 70 75 80

Ile Trp Gly Leu Ala Gly Phe Leu Cys Asp Val Cys Asn Phe Met Ser
 85 90 95

His Glu Lys Cys Leu Lys His Val Arg Ile Pro Cys Thr Ser Val Ala
 100 105 110

Pro Ser Leu Val Arg Val Pro Val Ala His Cys Phe Gly Pro Arg Gly
115 120 125

Leu His Lys Arg Lys Phe Cys Ala Val Cys Arg Lys Val Leu Glu Ala
130 135 140

Pro Ala Leu His Cys Glu Val Cys Glu Leu His Leu His Pro Asp Cys
145 150 155 160

Val Pro Phe Ala Cys Ser Asp Cys Arg Gln Cys His Gln Asp Gly His
165 170 175

Gln Asp His Asp Thr His His His His Trp Arg Glu Gly Asn Leu Pro
180 185 190

Ser Gly Ala Arg Cys Glu Val Cys Arg Lys Thr Cys Gly Ser Ser Asp
195 200 205

Val Leu Ala Gly Val Arg Cys Glu Trp Cys Gly Val Gln Ala His Ser
210 215 220

Leu Cys Ser Ala Ala Leu Ala Pro Glu Cys Gly Phe Gly Arg Leu Arg
225 230 235 240

Ser Leu Val Leu Pro Pro Ala Cys Val Arg Leu Leu Pro Gly Gly Phe
245 250 255

Ser Lys Thr Gln Ser Phe Arg Ile Val Glu Ala Ala Glu Pro Gly Glu
260 265 270

Gly Gly Asp Gly Ala Asp Gly Ser Ala Ala Val Gly Pro Gly Arg Glu
275 280 285

Thr Gln Ala Thr Pro Glu Ser Gly Lys Gln Thr Leu Lys Ile Phe Asp
290 295 300

Gly Asp Asp Ala Val Arg Arg Ser Gln Phe Arg Leu Val Thr Val Ser
305 310 315 320

Arg Leu Ala Gly Ala Glu Glu Val Leu Glu Ala Ala Leu Arg Ala His
325 330 335

His Ile Pro Glu Asp Pro Gly His Leu Glu Leu Cys Arg Leu Pro Pro
 340 345 350

Ser Ser Gln Ala Cys Asp Ala Trp Ala Gly Gly Lys Ala Gly Ser Ala
 355 360 365

Val Ile Ser Glu Glu Gly Arg Ser Pro Gly Ser Gly Glu Ala Thr Pro
 370 375 380

Glu Ala Trp Val Ile Arg Ala Leu Pro Arg Ala Gln Glu Val Leu Lys
 385 390 395 400

Ile Tyr Pro Gly Trp Leu Lys Val Gly Val Ala Tyr Val Ser Val Arg
 405 410 415

Val Thr Pro Lys Ser Thr Ala Arg Ser Val Val Leu Glu Val Leu Pro
 420 425 430

Leu Leu Gly Arg Gln Ala Glu Ser Pro Glu Ser Phe Gln Leu Val Glu
 435 440 445

Val Ala Met Gly Cys Arg His Val Gln Arg Thr Met Leu Met Asp Glu
 450 455 460

Gln Pro Leu Leu Asp Arg Leu Gln Asp Ile Arg Gln Met Ser Val Arg
 465 470 475 480

Gln Val Ser Gln Thr Arg Phe Tyr Val Ala Glu Ser Arg Asp Val Ala
 485 490 495

Pro His Val Ser Leu Phe Val Gly Gly Leu Pro Pro Gly Leu Ser Pro
 500 505 510

Glu Glu Tyr Ser Ser Leu Leu His Glu Ala Gly Ala Thr Lys Ala Thr
 515 520 525

Val Val Ser Val Ser His Ile Tyr Ser Ser Gln Gly Ala Val Val Leu
 530 535 540

Asp Val Ala Cys Phe Ala Glu Ala Glu Arg Leu Tyr Met Leu Leu Lys
 545 550 555 560

Asp Met Ala Val Arg Gly Arg Leu Leu Thr Ala Leu Val Leu Pro Asp
 565 570 575

Leu Leu His Ala Lys Leu Pro Pro Asp Ser Cys Pro Leu Leu Val Phe
 580 585 590

Val Asn Pro Lys Ser Gly Gly Leu Lys Gly Arg Asp Leu Leu Cys Ser
 595 600 605

Phe Arg Lys Leu Leu Asn Pro His Gln Val Phe Asp Leu Thr Asn Gly
 610 615 620

Gly Pro Leu Pro Gly Leu His Leu Phe Ser Gln Val Pro Cys Phe Arg
 625 630 635 640

Val Leu Val Cys Gly Gly Asp Gly Thr Val Gly Trp Val Leu Gly Ala
 645 650 655

Leu Glu Glu Thr Arg Tyr Arg Leu Ala Cys Pro Glu Pro Ser Val Ala
 660 665 670

Ile Leu Pro Leu Gly Thr Gly Asn Asp Leu Gly Arg Val Leu Arg Trp
 675 680 685

Gly Ala Gly Tyr Ser Gly Glu Asp Pro Phe Ser Val Leu Leu Ser Val
 690 695 700

Asp Glu Ala Asp Ala Val Leu Met Asp Arg Trp Thr Ile Leu Leu Asp
 705 710 715 720

Ala His Glu Ala Gly Ser Ala Glu Asn Asp Thr Ala Asp Ala Glu Pro
 725 730 735

Pro Lys Ile Val Gln Met Ser Asn Tyr Cys Gly Ile Gly Ile Asp Ala
 740 745 750

Glu Leu Ser Leu Asp Phe His Gln Ala Arg Glu Glu Glu Pro Gly Lys
 755 760 765

Phe Thr Ser Arg Leu His Asn Lys Gly Val Tyr Val Arg Val Gly Leu
 770 775 780

Gln Lys Ile Ser His Ser Arg Ser Leu His Lys Gln Ile Arg Leu Gln

785		790		795		800
Val Glu Arg Gln Glu Val Glu Leu Pro Ser Ile Glu Gly Leu Ile Phe						
	805			810		815
Ile Asn Ile Pro Ser Trp Gly Ser Gly Ala Asp Leu Trp Gly Ser Asp						
	820			825		830
Ser Asp Thr Arg Phe Glu Lys Pro Arg Met Asp Asp Gly Leu Leu Glu						
	835			840		845
Val Val Gly Val Thr Gly Val Val His Met Gly Gln Val Gln Gly Gly						
	850			855		860
Leu Arg Ser Gly Ile Arg Ile Ala Gln Gly Ser Tyr Phe Arg Val Thr						
	865			870		875
						880
Leu Leu Lys Ala Thr Pro Val Gln Val Asp Gly Glu Pro Trp Val Gln						
	885			890		895
Ala Pro Gly His Met Ile Ile Ser Ala Ala Gly Pro Lys Val His Met						
	900			905		910
Leu Arg Lys Ala Lys Gln Lys Pro Arg Arg Ala Gly Thr Thr Arg Asp						
	915			920		925
Ala Arg Ala Asp Arg Ala Pro Ala Pro Glu Ser Asp Pro Arg						
	930			935		940

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 <213> Homo sapiens

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cctcgggatt atttagatgc cgctgctgcg gagaacatct cggctgctgt ctctctcccg	240
gttcctgccg tagagccaga gcctgagctc gtagtcaacc cctgggacat tgtcttgtgt	300
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<210> 214
<211> 334
<212> PRT
<213> Homo sapiens

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<400> 214

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Met Asn Glu Asp Leu Lys Val Asn Leu Ser Gly Leu Pro Arg Asp Tyr
1           5           10           15

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Leu Asp Ala Ala Ala Ala Glu Asn Ile Ser Ala Ala Val Ser Ser Arg
          20           25           30

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Val Pro Ala Val Glu Pro Glu Pro Glu Leu Val Val Asn Pro Trp Asp
35           40           45

```

```

Ile Val Leu Cys Thr Ser Gly Thr Leu Ile Ser Cys Glu Asn Ala Ile
50           55           60

```

```

Val Val Leu Ile Ile Phe His Asn Pro Ser Leu Arg Ala Pro Met Phe
65           70           75           80

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Leu Leu Ile Gly Ser Leu Ala Leu Ala Asp Leu Leu Ala Gly Ile Gly
 85 90 95

Leu Ile Thr Asn Phe Val Phe Ala Tyr Leu Leu Gln Ser Glu Ala Thr
 100 105 110

Lys Leu Val Thr Ile Gly Leu Ile Val Ala Ser Phe Ser Ala Ser Val
 115 120 125

Cys Ser Leu Leu Ala Ile Thr Val Asp Arg Tyr Leu Ser Leu Tyr Tyr
 130 135 140

Ala Leu Thr Tyr His Ser Glu Arg Thr Val Thr Phe Thr Tyr Val Met
 145 150 155 160

Leu Val Met Leu Trp Gly Thr Ser Ile Cys Leu Gly Leu Leu Pro Val
 165 170 175

Met Gly Trp Asn Cys Leu Arg Asp Glu Ser Thr Cys Ser Val Val Arg
 180 185 190

Pro Leu Thr Lys Asn Asn Ala Ala Ile Leu Ser Val Ser Phe Leu Phe
 195 200 205

Met Phe Ala Leu Met Leu Gln Leu Tyr Ile Gln Ile Cys Lys Ile Val
 210 215 220

Met Arg His Ala His Gln Ile Ala Leu Gln His His Phe Leu Ala Thr
 225 230 235 240

Ser His Tyr Val Thr Thr Arg Lys Gly Val Ser Thr Leu Ala Ile Ile
 245 250 255

Leu Gly Thr Phe Ala Ala Cys Trp Met Pro Phe Thr Leu Tyr Ser Leu
 260 265 270

Ile Ala Asp Tyr Thr Tyr Pro Ser Ile Tyr Thr Tyr Ala Thr Leu Leu
 275 280 285

Pro Ala Thr Tyr Asn Ser Ile Ile Asn Pro Val Ile Tyr Ala Phe Arg
 290 295 300

Asn Gln Glu Ile Gln Lys Ala Leu Cys Leu Ile Cys Cys Gly Cys Ile
 305 310 315 320

Pro Ser Ser Leu Ala Gln Arg Ala Arg Ser Pro Ser Asp Val
 325 330

<210> 215
 <211> 2169
 <212> DNA
 <213> Homo sapiens

<400> 215
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 ttgggcaagg ggggcttcgc ccgctgctac gaggccactg acacagagac tggcagcgcc 180
 tacgctgtca aagtcatccc gcagagccgc gtcgccaagc cgcacacagc cgagaagatc 240
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 gccacatctt ggaaggcccc gcacacctg ttggagccag aagtgcgcta ctacctgcgg 420
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 gctccagaag tgctgctgag acagggccac ggccctgaag cggatgtatg gtcactgggc 660
 tgtgtcatgt acacgctgct ctgcgggagc cctccctttg agacggctga cctgaaggag 720
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<210> 216
 <211> 607
 <212> PRT
 <213> Homo sapiens

<400> 216

Met Leu Ala Gly Leu Pro Thr Ser Asp Pro Gly Arg Leu Ile Thr Asp
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Pro Arg Ser Gly Arg Thr Tyr Leu Lys Gly Arg Leu Leu Gly Lys Gly
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Gly Phe Ala Arg Cys Tyr Glu Ala Thr Asp Thr Glu Thr Gly Ser Ala
 35 40 45

Tyr Ala Val Lys Val Ile Pro Gln Ser Arg Val Ala Lys Pro His Gln
 50 55 60

Arg Glu Lys Ile Leu Asn Glu Ile Glu Leu His Arg Asp Leu Gln His
 65 70 75 80

Arg	His	Ile	Val	Arg	Phe	Ser	His	His	Phe	Glu	Asp	Ala	Asp	Asn	Ile	85	90	95	
Tyr	Ile	Phe	Leu	Glu	Leu	Cys	Ser	Arg	Lys	Ser	Leu	Ala	His	Ile	Trp	100	105	110	
Lys	Ala	Arg	His	Thr	Leu	Leu	Glu	Pro	Glu	Val	Arg	Tyr	Tyr	Leu	Arg	115	120	125	
Gln	Ile	Leu	Ser	Gly	Leu	Lys	Tyr	Leu	His	Gln	Arg	Gly	Ile	Leu	His	130	135	140	
Arg	Asp	Leu	Lys	Leu	Gly	Asn	Phe	Phe	Ile	Thr	Glu	Asn	Met	Glu	Leu	145	150	155	160
Lys	Val	Gly	Asp	Phe	Gly	Leu	Ala	Ala	Arg	Leu	Glu	Pro	Pro	Glu	Gln	165	170	175	
Arg	Lys	Lys	Thr	Ile	Cys	Gly	Thr	Pro	Asn	Tyr	Val	Ala	Pro	Glu	Val	180	185	190	
Leu	Leu	Arg	Gln	Gly	His	Gly	Pro	Glu	Ala	Asp	Val	Trp	Ser	Leu	Gly	195	200	205	
Cys	Val	Met	Tyr	Thr	Leu	Leu	Cys	Gly	Ser	Pro	Pro	Phe	Glu	Thr	Ala	210	215	220	
Asp	Leu	Lys	Glu	Thr	Tyr	Arg	Cys	Ile	Lys	Gln	Val	His	Tyr	Thr	Leu	225	230	235	240
Pro	Ala	Ser	Leu	Ser	Leu	Pro	Ala	Arg	Gln	Leu	Leu	Ala	Ala	Ile	Leu	245	250	255	
Arg	Ala	Ser	Pro	Arg	Asp	Arg	Pro	Ser	Ile	Asp	Gln	Ile	Leu	Arg	His	260	265	270	
Asp	Phe	Phe	Thr	Lys	Gly	Tyr	Thr	Pro	Asp	Arg	Leu	Pro	Ile	Ser	Ser	275	280	285	
Cys	Val	Thr	Val	Pro	Asp	Leu	Thr	Pro	Pro	Asn	Pro	Ala	Arg	Ser	Leu	290	295	300	

Phe Ala Lys Val Thr Lys Ser Leu Phe Gly Arg Lys Lys Lys Ser Lys
 305 310 315 320

Asn His Ala Gln Glu Arg Asp Glu Val Ser Gly Leu Val Ser Gly Leu
 325 330 335

Met Arg Thr Ser Val Gly His Gln Asp Ala Arg Pro Glu Ala Pro Ala
 340 345 350

Ala Ser Gly Pro Ala Pro Val Ser Leu Val Glu Thr Ala Pro Glu Asp
 355 360 365

Ser Ser Pro Arg Gly Thr Leu Ala Ser Ser Gly Asp Gly Phe Glu Glu
 370 375 380

Gly Leu Thr Val Ala Thr Val Val Glu Ser Ala Leu Cys Ala Leu Arg
 385 390 395 400

Asn Cys Ile Ala Phe Met Pro Pro Ala Glu Gln Asn Pro Ala Pro Leu
 405 410 415

Ala Gln Pro Glu Pro Leu Val Trp Val Ser Lys Trp Val Asp Tyr Ser
 420 425 430

Asn Lys Phe Gly Phe Gly Tyr Gln Leu Ser Ser Arg Arg Val Ala Val
 435 440 445

Leu Phe Asn Asp Gly Thr His Met Ala Leu Ser Ala Asn Arg Lys Thr
 450 455 460

Val His Tyr Asn Pro Thr Ser Thr Lys His Phe Ser Phe Ser Val Gly
 465 470 475 480

Ala Val Pro Arg Ala Leu Gln Pro Gln Leu Gly Ile Leu Arg Tyr Phe
 485 490 495

Ala Ser Tyr Met Glu Gln His Leu Met Lys Gly Gly Asp Leu Pro Ser
 500 505 510

Val Glu Glu Val Glu Val Pro Ala Pro Pro Leu Leu Leu Gln Trp Val
 515 520 525

Lys Thr Asp Gln Ala Leu Leu Met Leu Phe Ser Asp Gly Thr Val Gln
530 535 540

Val Asn Phe Tyr Gly Asp His Thr Lys Leu Ile Leu Ser Gly Trp Glu
545 550 555 560

Pro Leu Leu Val Thr Phe Val Ala Arg Asn Arg Ser Ala Cys Thr Tyr
565 570 575

Leu Ala Ser His Leu Arg Gln Leu Gly Cys Ser Pro Asp Leu Arg Gln
580 585 590

Arg Leu Arg Tyr Ala Leu Arg Leu Leu Arg Asp Arg Ser Pro Ala
595 600 605

<210> 217
<211> 1547
<212> DNA
<213> Homo sapiens

<400> 217
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catcaagatc ccaaatagtg gcgcggtgga ctggacagtg cactccgggc cgcagttact 180
cttcagggat gtgctggatg tgataggcca ggttctgcct gaagcaacaa ctacagcatt 240
tgaatatgaa gatgaagatg gtgatcgaat tacagtgaga agtgatgagg aaatgaaggc 300
aatgctgtca tattattatt ccacagtaat ggaacagcaa gtaaattggac agttaataga 360
gcctctgcag atattttccaa gagcctgcaa gcctcctggg gaacggaaca tacatggcct 420
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gatgaatgaa caagacatac gatatcggga cactcttggt catggcaacg gaggcacagt 600
ctacaaagca tatcatgtcc cgagtgggaa aatattagct gtaaagggtca tactactaga 660
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tacagaattc atggatgggg gatcctttgga tgtatatagg aaaatgccag aacatgtcct 840
tggaagaatt gcagtagcag ttgttaaagg ccttacttat ttgtggagtt taaagatttt 900
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<210> 218
<211> 448
<212> PRT
<213> Homo sapiens

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<400> 218

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Met Leu Trp Leu Ala Leu Gly Pro Phe Pro Ala Met Glu Asn Gln Val
1           5           10           15

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Leu Val Ile Arg Ile Lys Ile Pro Asn Ser Gly Ala Val Asp Trp Thr
20           25           30

```

```

Val His Ser Gly Pro Gln Leu Leu Phe Arg Asp Val Leu Asp Val Ile
35           40           45

```

```

Gly Gln Val Leu Pro Glu Ala Thr Thr Thr Ala Phe Glu Tyr Glu Asp
50           55           60

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Glu Asp Gly Asp Arg Ile Thr Val Arg Ser Asp Glu Glu Met Lys Ala
65           70           75           80

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Met Leu Ser Tyr Tyr Tyr Ser Thr Val Met Glu Gln Gln Val Asn Gly
85           90           95

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Gln Leu Ile Glu Pro Leu Gln Ile Phe Pro Arg Ala Cys Lys Pro Pro
100          105          110

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Gly Glu Arg Asn Ile His Gly Leu Lys Val Asn Thr Arg Ala Gly Pro
 115 120 125

Ser Gln His Ser Ser Pro Ala Val Ser Asp Ser Leu Pro Ser Asn Ser
 130 135 140

Leu Lys Lys Ser Ser Ala Glu Leu Lys Lys Ile Leu Ala Asn Gly Gln
 145 150 155 160

Met Asn Glu Gln Asp Ile Arg Tyr Arg Asp Thr Leu Gly His Gly Asn
 165 170 175

Gly Gly Thr Val Tyr Lys Ala Tyr His Val Pro Ser Gly Lys Ile Leu
 180 185 190

Ala Val Lys Val Ile Leu Leu Asp Ile Thr Leu Glu Leu Gln Lys Gln
 195 200 205

Ile Met Ser Glu Leu Glu Ile Leu Tyr Lys Cys Asp Ser Ser Tyr Ile
 210 215 220

Ile Gly Phe Tyr Gly Ala Phe Phe Val Glu Asn Arg Ile Ser Ile Cys
 225 230 235 240

Thr Glu Phe Met Asp Gly Gly Ser Leu Asp Val Tyr Arg Lys Met Pro
 245 250 255

Glu His Val Leu Gly Arg Ile Ala Val Ala Val Val Lys Gly Leu Thr
 260 265 270

Tyr Leu Trp Ser Leu Lys Ile Leu His Arg Asp Val Lys Pro Ser Asn
 275 280 285

Met Leu Val Asn Thr Arg Gly Gln Val Lys Leu Cys Asp Phe Gly Val
 290 295 300

Ser Thr Gln Leu Val Asn Ser Ile Ala Lys Thr Tyr Val Gly Thr Asn
 305 310 315 320

Ala Tyr Met Ala Pro Glu Arg Ile Ser Gly Glu Gln Tyr Gly Ile His
 325 330 335

Ser Asp Val Trp Ser Leu Gly Ile Ser Phe Met Glu Leu Ala Leu Gly

340

345

350

Arg Phe Pro Tyr Pro Gln Ile Gln Lys Asn Gln Gly Ser Leu Met Pro
 355 360 365

Leu Gln Leu Leu Gln Cys Ile Val Asp Glu Asp Ser Pro Val Leu Pro
 370 375 380

Val Gly Glu Phe Ser Glu Pro Phe Val His Phe Ile Thr Gln Cys Met
 385 390 395 400

Arg Lys Gln Pro Lys Glu Arg Pro Ala Pro Glu Glu Leu Met Gly His
 405 410 415

Pro Phe Ile Val Gln Phe Asn Asp Gly Asn Ala Ala Val Val Ser Met
 420 425 430

Trp Val Cys Arg Ala Leu Glu Glu Arg Arg Ser Gln Gln Gly Pro Pro
 435 440 445

<210> 219

<211> 3068

<212> DNA

<213> Homo sapiens

<400> 219

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gggcctttct tctccttgta ggggtctctc agaggttctt tccacaggcc atcctcttat 3060
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<210> 220
<211> 801
<212> PRT
<213> Homo sapiens

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<400> 220

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Met Gly Asp Thr Val Val Glu Pro Ala Pro Leu Lys Pro Thr Ser Glu
1          5          10          15

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Pro Thr Ser Gly Pro Pro Gly Asn Asn Gly Gly Ser Leu Leu Ser Val
20          25          30

```

```

Ile Thr Glu Gly Val Gly Glu Leu Ser Val Ile Asp Pro Glu Val Ala
35          40          45

```

```

Gln Lys Ala Cys Gln Glu Val Leu Glu Lys Val Lys Leu Leu His Gly
50          55          60

```

```

Gly Val Ala Val Ser Ser Arg Gly Thr Pro Leu Glu Leu Val Asn Gly
65          70          75          80

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Asp Gly Val Asp Ser Glu Ile Arg Cys Leu Asp Asp Pro Pro Ala Gln
85          90          95

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Ile Arg Glu Glu Glu Asp Glu Met Gly Ala Ala Val Ala Ser Gly Thr
100         105         110

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Ala	Lys	Gly	Ala	Arg	Arg	Arg	Arg	Gln	Asn	Asn	Ser	Ala	Lys	Gln	Ser	115	120	125
Trp	Leu	Leu	Arg	Leu	Phe	Glu	Ser	Lys	Leu	Phe	Asp	Ile	Ser	Met	Ala	130	135	140
Ile	Ser	Tyr	Leu	Tyr	Asn	Ser	Lys	Glu	Pro	Gly	Val	Gln	Ala	Tyr	Ile	145	150	155
Gly	Asn	Arg	Leu	Phe	Cys	Phe	Arg	Asn	Glu	Asp	Val	Asp	Phe	Tyr	Leu	165	170	175
Pro	Gln	Leu	Leu	Asn	Met	Tyr	Ile	His	Met	Asp	Glu	Asp	Val	Gly	Asp	180	185	190
Ala	Ile	Lys	Pro	Tyr	Ile	Val	His	Arg	Cys	Arg	Gln	Ser	Ile	Asn	Phe	195	200	205
Ser	Leu	Gln	Cys	Ala	Leu	Leu	Val	Gly	Ala	Tyr	Ser	Ser	Asp	Met	His	210	215	220
Ile	Ser	Thr	Gln	Arg	His	Ser	Arg	Gly	Thr	Lys	Leu	Arg	Lys	Leu	Ile	225	230	235
Leu	Ser	Asp	Glu	Leu	Lys	Pro	Ala	His	Arg	Lys	Arg	Glu	Leu	Pro	Ser	245	250	255
Leu	Ser	Pro	Ala	Pro	Asp	Thr	Gly	Leu	Ser	Pro	Ser	Lys	Arg	Thr	His	260	265	270
Gln	Arg	Ser	Lys	Ser	Asp	Ala	Thr	Ala	Ser	Ile	Ser	Leu	Ser	Ser	Asn	275	280	285
Leu	Lys	Arg	Thr	Ala	Ser	Asn	Pro	Lys	Val	Glu	Asn	Glu	Asp	Glu	Pro	290	295	300
Val	Arg	Leu	Ala	Pro	Glu	Arg	Glu	Phe	Ile	Lys	Ser	Leu	Met	Ala	Ile	305	310	315
Gly	Lys	Arg	Val	Val	Thr	Leu	Pro	Thr	Lys	Glu	Gln	Lys	Thr	Gln	Arg	325	330	335

Leu Ile Ser Glu Leu Ser Leu Leu Asn His Lys Leu Pro Ala Arg Val
 340 345 350

Trp Leu Ser Thr Ala Gly Phe Asp His His Val Val Arg Val Pro His
 355 360 365

Thr Gln Ala Val Val Leu Asn Ser Lys Asp Lys Ala Pro Tyr Leu Ile
 370 375 380

Tyr Val Glu Val Leu Glu Cys Glu Asn Phe Asp Thr Thr Ser Val Pro
 385 390 395 400

Ala Arg Ile Pro Glu Asn Arg Ile Arg Ser Thr Arg Ser Val Glu Asn
 405 410 415

Leu Pro Glu Cys Gly Ile Thr His Glu Gln Arg Ala Gly Ser Phe Ser
 420 425 430

Thr Val Pro Asn Tyr Asp Asn Asp Asp Glu Ala Trp Ser Val Asp Asp
 435 440 445

Ile Gly Glu Leu Gln Val Glu Leu Pro Glu Val His Thr Asn Ser Cys
 450 455 460

Asp Asn Ile Ser Gln Phe Ser Val Asp Ser Ile Thr Ser Gln Glu Ser
 465 470 475 480

Lys Glu Pro Val Phe Ile Ala Ala Gly Asp Ile Arg Arg Arg Leu Ser
 485 490 495

Glu Gln Leu Ala His Thr Pro Thr Ala Phe Lys Arg Asp Pro Glu Asp
 500 505 510

Pro Ser Ala Val Ala Leu Lys Glu Pro Trp Gln Glu Lys Val Arg Arg
 515 520 525

Ile Arg Glu Gly Ser Pro Tyr Gly His Leu Pro Asn Trp Arg Leu Leu
 530 535 540

Ser Val Ile Val Lys Cys Gly Asp Asp Leu Arg Gln Glu Leu Leu Ala
 545 550 555 560

Phe Gln Val Leu Lys Gln Leu Gln Ser Ile Trp Glu Gln Glu Arg Val
565 570 575

Pro Leu Trp Ile Lys Pro Tyr Lys Ile Leu Val Ile Ser Ala Asp Ser
580 585 590

Gly Met Ile Glu Pro Val Val Asn Ala Val Ser Ile His Gln Val Lys
595 600 605

Lys Gln Ser Gln Leu Ser Leu Leu Asp Tyr Phe Leu Gln Glu His Gly
610 615 620

Ser Tyr Thr Thr Glu Ala Phe Leu Ser Ala Gln Arg Asn Phe Val Gln
625 630 635 640

Ser Cys Ala Gly Tyr Cys Leu Val Cys Tyr Leu Leu Gln Val Lys Asp
645 650 655

Arg His Asn Gly Asn Ile Leu Leu Asp Ala Glu Gly His Ile Ile His
660 665 670

Ile Asp Phe Gly Phe Ile Leu Ser Ser Ser Pro Arg Asn Leu Gly Phe
675 680 685

Glu Thr Ser Ala Phe Lys Leu Thr Thr Glu Phe Val Asp Val Met Gly
690 695 700

Gly Leu Asp Gly Asp Met Phe Asn Tyr Tyr Lys Met Leu Met Leu Gln
705 710 715 720

Gly Leu Ile Ala Ala Arg Lys His Met Asp Lys Val Val Gln Ile Val
725 730 735

Glu Ile Met Gln Gln Gly Ser Gln Leu Pro Cys Phe His Gly Ser Ser
740 745 750

Thr Ile Arg Asn Leu Lys Glu Arg Phe His Met Ser Met Thr Glu Glu
755 760 765

Gln Leu Gln Leu Leu Val Glu Gln Met Val Asp Gly Ser Met Arg Ser
770 775 780

Ile Thr Thr Lys Leu Tyr Asp Gly Phe Gln Tyr Leu Thr Asn Gly Ile

785

790

795

800

Met

<210> 221

<211> 4450

<212> DNA

<213> Homo sapiens

<400> 221

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atcacggagg agtcacacgt catcgacacc ggtgacagcc tgtccatctc ctgcagggga	180
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tttataaaaa	4450

<210> 222
 <211> 1298
 <212> PRT
 <213> Homo sapiens

 <400> 222

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 Asn Ile Thr Glu Glu Ser His Val Ile Asp Thr Gly Asp Ser Leu Ser
 35 40 45
 Ile Ser Cys Arg Gly Gln His Pro Leu Glu Trp Ala Trp Pro Gly Ala
 50 55 60
 Gln Glu Ala Pro Ala Thr Gly Asp Lys Asp Ser Glu Asp Thr Gly Val
 65 70 75 80
 Val Arg Asp Cys Glu Gly Thr Asp Ala Arg Pro Tyr Cys Lys Val Leu
 85 90 95
 Leu Leu His Glu Val His Ala Asn Asp Thr Gly Ser Tyr Val Cys Tyr
 100 105 110
 Tyr Lys Tyr Ile Lys Ala Arg Ile Glu Gly Thr Thr Ala Ala Ser Ser
 115 120 125
 Tyr Val Phe Val Arg Asp Phe Glu Gln Pro Phe Ile Asn Lys Pro Asp
 130 135 140
 Thr Leu Leu Val Asn Arg Lys Asp Ala Met Trp Val Pro Cys Leu Val
 145 150 155 160
 Ser Ile Pro Gly Leu Asn Val Thr Leu Arg Ser Gln Ser Ser Val Leu
 165 170 175
 Trp Pro Asp Gly Gln Glu Val Val Trp Asp Asp Arg Arg Gly Met Leu
 180 185 190
 Val Ser Thr Pro Leu Leu His Asp Ala Leu Tyr Leu Gln Cys Glu Thr
 195 200 205
 Thr Trp Gly Asp Gln Asp Phe Leu Ser Asn Pro Phe Leu Val His Ile
 210 215 220
 Thr Gly Asn Glu Leu Tyr Asp Ile Gln Leu Leu Pro Arg Lys Ser Leu

225		230		235		240
Glu Leu Leu Val	Gly Glu Lys Leu Val	Leu Asn Cys Thr Val	Trp Ala			
	245	250	255			
Glu Phe Asn Ser	Gly Val Thr Phe Asp Trp Asp Tyr Pro	Gly Lys Gln				
	260	265	270			
Ala Glu Arg Gly	Lys Trp Val Pro Glu Arg Arg Ser	Gln Gln Thr His				
	275	280	285			
Thr Glu Leu Ser	Ser Ile Leu Thr Ile His Asn Val Ser	Gln His Asp				
	290	295	300			
Leu Gly Ser Tyr	Val Cys Lys Ala Asn Asn Gly Ile Gln Arg Phe Arg					
305	310	315	320			
Glu Ser Thr Glu	Val Ile Val His Glu Asn Pro Phe Ile Ser	Val Glu				
	325	330	335			
Trp Leu Lys Gly	Pro Ile Leu Glu Ala Thr Ala Gly Asp	Glu Leu Val				
	340	345	350			
Lys Leu Pro Val	Lys Leu Ala Ala Tyr Pro Pro Pro	Glu Phe Gln Trp				
	355	360	365			
Tyr Lys Asp Gly	Lys Ala Leu Ser Gly Arg His Ser Pro His Ala Leu					
	370	375	380			
Val Leu Lys Glu	Val Thr Glu Ala Ser Thr Gly Thr Tyr Thr Leu Ala					
385	390	395	400			
Leu Trp Asn Ser	Ala Ala Gly Leu Arg Arg Asn Ile Ser Leu Glu Leu					
	405	410	415			
Val Val Asn Val	Pro Pro Gln Ile His Glu Lys Glu Ala Ser Ser Pro					
	420	425	430			
Ser Ile Tyr Ser	Arg His Ser Arg Gln Ala Leu Thr Cys Thr Ala Tyr					
	435	440	445			
Gly Val Pro Leu	Pro Leu Ser Ile Gln Trp His Trp Arg Pro Trp Thr					
450	455	460				

Pro Cys Lys Met Phe Ala Gln Arg Ser Leu Arg Arg Arg Gln Gln Gln
 465 470 475 480

Asp Leu Met Pro Gln Cys Arg Asp Trp Arg Ala Val Thr Thr Gln Asp
 485 490 495

Ala Val Asn Pro Ile Glu Ser Leu Asp Thr Trp Thr Glu Phe Val Glu
 500 505 510

Gly Lys Asn Lys Thr Val Ser Lys Leu Val Ile Gln Asn Ala Asn Val
 515 520 525

Ser Ala Met Tyr Lys Cys Val Val Ser Asn Lys Val Gly Gln Asp Glu
 530 535 540

Arg Leu Ile Tyr Phe Tyr Val Thr Thr Ile Pro Asp Gly Phe Thr Ile
 545 550 555 560

Glu Ser Lys Pro Ser Glu Glu Leu Leu Glu Gly Gln Pro Val Leu Leu
 565 570 575

Ser Cys Gln Ala Asp Ser Tyr Lys Tyr Glu His Leu Arg Trp Tyr Arg
 580 585 590

Leu Asn Leu Ser Thr Leu His Asp Ala His Gly Asn Pro Leu Leu Leu
 595 600 605

Asp Cys Lys Asn Val His Leu Phe Ala Thr Pro Leu Ala Ala Ser Leu
 610 615 620

Glu Glu Val Ala Pro Gly Ala Arg His Ala Thr Leu Ser Leu Ser Ile
 625 630 635 640

Pro Arg Val Ala Pro Glu His Glu Gly His Tyr Val Cys Glu Val Gln
 645 650 655

Asp Arg Arg Ser His Asp Lys His Cys His Lys Lys Tyr Leu Ser Val
 660 665 670

Gln Ala Leu Glu Ala Pro Arg Leu Thr Gln Asn Leu Thr Asp Leu Leu
 675 680 685

Val Asn Val Ser Asp Ser Leu Glu Met Gln Cys Leu Val Ala Gly Ala
690 695 700

His Ala Pro Ser Ile Val Trp Tyr Lys Asp Glu Arg Leu Leu Glu Glu
705 710 715 720

Lys Ser Gly Val Asp Leu Ala Asp Ser Asn Gln Lys Leu Ser Ile Gln
725 730 735

Arg Val Arg Glu Glu Asp Ala Gly Pro Tyr Leu Cys Ser Val Cys Arg
740 745 750

Pro Lys Gly Cys Val Asn Ser Ser Ala Ser Val Ala Val Glu Gly Ser
755 760 765

Glu Asp Lys Gly Ser Met Glu Ile Val Ile Leu Val Gly Thr Gly Val
770 775 780

Ile Ala Val Phe Phe Trp Val Leu Leu Leu Leu Ile Phe Cys Asn Met
785 790 795 800

Arg Arg Pro Ala His Ala Asp Ile Lys Thr Gly Tyr Leu Ser Ile Ile
805 810 815

Met Asp Pro Gly Glu Val Pro Leu Glu Glu Gln Cys Glu Tyr Leu Ser
820 825 830

Tyr Asp Ala Ser Gln Trp Glu Phe Pro Arg Glu Arg Leu His Leu Gly
835 840 845

Arg Val Leu Gly Tyr Gly Ala Phe Gly Lys Val Val Glu Ala Ser Ala
850 855 860

Phe Gly Ile His Lys Gly Ser Ser Cys Asp Thr Val Ala Val Lys Met
865 870 875 880

Leu Lys Glu Gly Ala Thr Ala Ser Glu Gln Arg Ala Leu Met Ser Glu
885 890 895

Leu Lys Ile Leu Ile His Ile Gly Asn His Leu Asn Val Val Asn Leu
900 905 910

Leu Gly Ala Cys Thr Lys Pro Gln Gly Pro Leu Met Val Ile Val Glu
 915 920 925

Phe Cys Lys Tyr Gly Asn Leu Ser Asn Phe Leu Arg Ala Lys Arg Asp
 930 935 940

Ala Phe Ser Pro Cys Ala Glu Lys Ser Pro Glu Gln Arg Gly Arg Phe
 945 950 955 960

Arg Ala Met Val Glu Leu Ala Arg Leu Asp Arg Arg Arg Pro Gly Ser
 965 970 975

Ser Asp Arg Val Leu Phe Ala Arg Phe Ser Lys Thr Glu Gly Gly Ala
 980 985 990

Arg Arg Ala Ser Pro Asp Gln Glu Ala Glu Asp Leu Trp Leu Ser Pro
 995 1000 1005

Leu Thr Met Glu Asp Leu Val Cys Tyr Ser Phe Gln Val Ala Arg
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Gly Met Glu Phe Leu Ala Ser Arg Lys Cys Ile His Arg Asp Leu
 1025 1030 1035

Ala Ala Arg Asn Ile Leu Leu Ser Glu Ser Asp Val Val Lys Ile
 1040 1045 1050

Cys Asp Phe Gly Leu Ala Arg Asp Ile Tyr Lys Asp Pro Asp Tyr
 1055 1060 1065

Val Arg Lys Gly Ser Ala Arg Leu Pro Leu Lys Trp Met Ala Pro
 1070 1075 1080

Glu Ser Ile Phe Asp Lys Val Tyr Thr Thr Gln Ser Asp Val Trp
 1085 1090 1095

Ser Phe Gly Val Leu Leu Trp Glu Ile Phe Ser Leu Gly Ala Ser
 1100 1105 1110

Pro Tyr Pro Gly Val Gln Ile Asn Glu Glu Phe Cys Gln Arg Val
 1115 1120 1125

Arg Asp Gly Thr Arg Met Arg Ala Pro Glu Leu Ala Thr Pro Ala

1130	1135	1140
Ile Arg His Ile Met Leu Asn Cys Trp Ser Gly Asp Pro Lys Ala		
1145	1150	1155
Arg Pro Ala Phe Ser Asp Leu Val Glu Ile Leu Gly Asp Leu Leu		
1160	1165	1170
Gln Gly Arg Gly Leu Gln Glu Glu Glu Glu Val Cys Met Ala Pro		
1175	1180	1185
Arg Ser Ser Gln Ser Ser Glu Glu Gly Ser Phe Ser Gln Val Ser		
1190	1195	1200
Thr Met Ala Leu His Ile Ala Gln Ala Asp Ala Glu Asp Ser Pro		
1205	1210	1215
Pro Ser Leu Gln Arg His Ser Leu Ala Ala Arg Tyr Tyr Asn Trp		
1220	1225	1230
Val Ser Phe Pro Gly Cys Leu Ala Arg Gly Ala Glu Thr Arg Gly		
1235	1240	1245
Ser Ser Arg Met Lys Thr Phe Glu Glu Phe Pro Met Thr Pro Thr		
1250	1255	1260
Thr Tyr Lys Gly Ser Val Asp Asn Gln Thr Asp Ser Gly Met Val		
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Leu Ala Ser Glu Glu Phe Glu Gln Ile Glu Ser Arg His Arg Gln		
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Glu Ser Gly Phe Arg		
1295		

<210> 223

<211> 3437

<212> DNA

<213> Homo sapiens

<400> 223

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<210> 224

<211> 424
 <212> PRT
 <213> Homo sapiens

<400> 224

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Gln Leu Asp Leu Val Lys Lys Val Glu Pro Phe Ser Gly Thr Lys Ser
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Asp Val Tyr Lys His Phe Ile Thr Glu Val Asp Ser Val Gly Pro Val
 35 40 45

Lys Ala Gly Phe Pro Ala Ala Ser Gln Tyr Ala His Pro Cys Pro Gly
 50 55 60

Pro Pro Thr Ala Gly His Thr Glu Pro Pro Ser Glu Pro Pro Arg Arg
 65 70 75 80

Ala Arg Val Ala Lys Tyr Arg Ala Lys Phe Asp Pro Arg Val Thr Ala
 85 90 95

Lys Tyr Asp Ile Lys Ala Leu Ile Gly Arg Gly Ser Phe Ser Arg Val
 100 105 110

Val Arg Val Glu His Arg Ala Thr Arg Gln Pro Tyr Ala Ile Lys Met
 115 120 125

Ile Glu Thr Lys Tyr Arg Glu Gly Arg Glu Val Cys Glu Ser Glu Leu
 130 135 140

Arg Val Leu Arg Arg Val Arg His Ala Asn Ile Ile Gln Leu Val Glu
 145 150 155 160

Val Phe Glu Thr Gln Glu Arg Val Tyr Met Val Met Glu Leu Ala Thr
 165 170 175

Gly Gly Glu Leu Phe Asp Arg Ile Ile Ala Lys Gly Ser Phe Thr Glu
 180 185 190

Arg Asp Ala Thr Arg Val Leu Gln Met Val Leu Asp Gly Val Arg Tyr
 195 200 205

Leu His Ala Leu Gly Ile Thr His Arg Asp Leu Lys Pro Glu Asn Leu
 210 215 220

Leu Tyr Tyr His Pro Gly Thr Asp Ser Lys Ile Ile Ile Thr Asp Phe
 225 230 235 240

Gly Leu Ala Ser Ala Arg Lys Lys Gly Asp Asp Cys Leu Met Lys Thr
 245 250 255

Thr Cys Gly Thr Pro Glu Tyr Ile Ala Pro Glu Val Leu Val Arg Lys
 260 265 270

Pro Tyr Thr Asn Ser Val Asp Met Trp Ala Leu Gly Val Ile Ala Tyr
 275 280 285

Ile Leu Leu Ser Gly Thr Met Pro Phe Glu Asp Asp Asn Arg Thr Arg
 290 295 300

Leu Tyr Arg Gln Ile Leu Arg Gly Lys Tyr Ser Tyr Ser Gly Glu Pro
 305 310 315 320

Trp Pro Ser Val Ser Asn Leu Ala Lys Asp Phe Ile Asp Arg Leu Leu
 325 330 335

Thr Val Asp Pro Gly Ala Arg Met Thr Ala Leu Gln Ala Leu Arg His
 340 345 350

Pro Trp Val Val Ser Met Ala Ala Ser Ser Ser Met Lys Asn Leu His
 355 360 365

Arg Ser Ile Ser Gln Asn Leu Leu Lys Arg Ala Ser Ser Arg Cys Gln
 370 375 380

Ser Thr Lys Ser Ala Gln Ser Thr Arg Ser Ser Arg Ser Thr Arg Ser
 385 390 395 400

Asn Lys Ser Arg Arg Val Arg Glu Arg Glu Leu Arg Glu Leu Asn Leu
 405 410 415

Arg Tyr Gln Gln Gln Tyr Asn Gly
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 <211> 411
 <212> DNA
 <213> Homo sapiens

<400> 225
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 acgcaggcac tggagcaggt gacaaaagtg ctggaggact tcgtggatgg agaccacgtc 180
 atcctgcaaa agtacgtggc atgcctagaa gaacttcgtg aagctctgga gatctcccc 240
 ttcttcaaga cccacgaggt ggtaggcagc tccctcctct tcgtgcacga ccacaccggc 300
 ctggccaagg tctggatgat agacttcggc aagacggtgg ccttgcccga ccaccagacg 360
 ctcagccaca ggctgccctg ggctgagggc aaccgtgagg acggctacct c 411

<210> 226
 <211> 137
 <212> PRT
 <213> Homo sapiens

<400> 226

Ala Val Thr Lys Pro Arg Tyr Met Gln Trp Arg Glu Thr Met Ser Ser
 1 5 10 15

Thr Ser Thr Leu Gly Phe Arg Ile Glu Gly Ile Lys Lys Ala Asp Gly
 20 25 30

Thr Cys Asn Thr Asn Phe Lys Lys Thr Gln Ala Leu Glu Gln Val Thr
 35 40 45

Lys Val Leu Glu Asp Phe Val Asp Gly Asp His Val Ile Leu Gln Lys
 50 55 60

Tyr Val Ala Cys Leu Glu Glu Leu Arg Glu Ala Leu Glu Ile Ser Pro
 65 70 75 80

Phe Phe Lys Thr His Glu Val Val Gly Ser Ser Leu Leu Phe Val His
 85 90 95

Asp His Thr Gly Leu Ala Lys Val Trp Met Ile Asp Phe Gly Lys Thr
 100 105 110

Val Ala Leu Pro Asp His Gln Thr Leu Ser His Arg Leu Pro Trp Ala

115

120

125

Glu Gly Asn Arg Glu Asp Gly Tyr Leu
130 135